ARTEMIS GOLD INC | Blackwater Mine

Blackwater Gold Mine Annual DS Follow-Up Report

April 1, 2022 – March 31, 2023

Executive Summary

The Blackwater Gold Project (the Project) is a gold and silver open pit mine currently under construction in central British Columbia (BC), approximately 112 kilometers (km) southwest of Vanderhoof, 160 km southwest of Prince George, and 446 km northeast of Vancouver. It is situated within the traditional territories of Lhoosk'uz Dené Nation, Ulkatcho First Nation, Skin Tyee Nation and Tsilhqot'in Nation. The Kluskus and Kluskus-Ootsa FSRs and Project transmission line cross the traditional territories of Nadleh Whut'en First Nation, Saik'uz First Nation, and Stellat'en First Nation (collectively, the Carrier Sekani First Nations) as well as the traditional territories of the Nazko First Nation, Nee-Tahi-Buhn Band, Cheslatta Carrier Nation and Yekooche First Nation.

Major mine components will include a tailings storage facility (TSF), ore processing facilities, waste rock, overburden and soil stockpiles, borrow areas and quarries, water management infrastructure, water treatment plants, accommodation camps and ancillary facilities. Limited early works construction activities to develop these components began in October 2022 and continued through December. Prior to this (January – September), the Project was in the pre-construction phase.

Development of this operation is facilitated by a number of approvals, including a Decision Statement (DS) issued under the *Canadian Environmental Assessment Act, 2012* in April 2019. Condition 2.11 of the DS requires the development of an Annual Follow-up Program Report (FUP), summarizing follow-up activities and monitoring results from a number of key monitoring programs required by the DS, including the:

- Air Quality and Fugitive Dust Management Plan;
- Aquatic Effects Monitoring Plan, including management of sediment and erosion.
- Caribou Mitigation and Monitoring Plan.
- Country Foods and Socio-economic Follow-up Program;
- Country Foods Monitoring Plan.
- Follow-up Program for Condition 3.14 of the Blackwater Gold Project.
- Follow-up Program for Condition 3.16 of the Blackwater Gold Project.
- Mine Site Water and Discharge Monitoring and Management Plan.
- Wetland Management and Offsetting Plan;
- Whitebark Pine Management Plan; and,
- Wildlife Mitigation and Monitoring Plan.

In general, limited construction activities occurred during the reporting period resulting in limited monitoring results. For those monitoring plans listed above only particulate matter monitoring through the *Air Quality and Fugitive Dust Management Plan* triggered adaptive management. This event occurred in December 2022, and resulted in a 'Low' trigger level exceedance, a summary of this result is in Section 8 of this document.

Several learnings did occur through implementation of the monitoring programs. These were based on observations made during monitoring events and through a review of monitoring results. Specifics are provided in the relevant sections of the FUP; however, they include adjusting sampling set ups, exploring relationships, and temporal shifts.

Résumé Exécutif

Le Projet Blackwater Gold (le Projet) est une mine à ciel ouvert d'or et d'argent en construction dans le centre de la Colombie-Britannique (C.-B.), à environ 112 kilomètres (km) au sud-ouest de Vanderhoof, 160 km au sud-ouest de Prince George et 446 km au nord-est de Vancouver. La mine est situé sur les territoires traditionnels de la Nation Lhoosk'uz Dené, de la Première Nation Ulkatcho, de la Nation Skin Tyee et de la Nation Tsilhqot'in. Le chemin forestier (FSR) de Kluskus et Kluskus-Ootsa et la ligne de transmission du projet traversent les territoires traditionnels de la Première Nation Nadleh Whut'en, de la Première Nation Saik'uz et de la Première Nation Stellat'en (collectivement, les Premières Nations du Nechako) ainsi que les territoires traditionnels de la Première Nation Nazko, de la bande Nee-Tahi-Buhn, de la Nation Cheslatta Carrier et de la Première Nation Yekooche.

Les composantes majeures de la mine comprendront une installation de stockage des résidus (TSF), des installations de stations d'épuration, des stocks de stériles, de morts-terrains et de sols, des zones d'emprunt et des carrières, des infrastructures de gestion de l'eau, des usines de traitement des eaux, des camps d'hébergement et des installations auxiliaires. Les premières activités de construction limitées pour développer ces composants ont commencé en Octobre 2022 et se sont poursuivies jusqu'en Décembre. Avant cela (Janvier – Septembre), le projet était en phase de pré-construction.

Le développement de cette opération est facilité par un certain nombre d'approbations, y compris une déclaration de decision fédéral (DS) émise en vertu de la Loi canadienne sur l'évaluation environnementale (2012) en avril 2019. La condition 2.11 de la DS exige l'élaboration d'un rapport annuel sur le programme de suivi (FUP), résumant les activités de suivi et les résultats de surveillance d'un certain nombre de programmes de surveillance clés requis par le DS, notamment:

- Plan de gestion de la qualité de l'air et des poussières diffuses;
- Plan de surveillance des effets aquatiques, y compris la gestion des sédiments et de l'érosion;
- Plan d'atténuation et de surveillance du caribou;
- Programme d'aliments traditionnels et de suivi socio-économique;
- Plan de surveillance des aliments traditionnels;
- Programmes de suivi pour la condition 3.14 du projet Blackwater Gold;
- Programmes de suivi pour la condition 3.16 du projet Blackwater Gold;
- Plan de surveillance et de gestion des eaux de contact avec la mine et des rejets du site minier;
- Plan pour les zones humides et la compensation;
- Plan de gestion du pin à écorce blanche; et,
- Plan d'atténuation et de surveillance de la faune.

En général, des activités de construction limitées ont eu lieu au cours de la période de référence, ce qui a donné lieu à des résultats de surveillance limités. Pour les plans de surveillance énumérés ci-dessus, seule la surveillance des particules dans le cadre du plan de gestion de la qualité de l'air et des poussières fugitives a déclenché une gestion adaptative. Cet événement s'est produit en Décembre 2022 et a entraîné un dépassement du niveau de déclenchement 'faible'. Un résumé de ce résultat se trouve à la Section 8.0 de ce document.

Plusieurs enseignements ont été tirés de la mise en œuvre des programmes de surveillance.Celles-ci étaient basées sur des observations faites lors d'événements de surveillance et sur un examen des résultats de la surveillance. Les détails sont fournis dans les sections pertinentes du FUP; cependant, ils incluent l'ajustement des configurations d'échantillonnage, l'exploration des relations et des décalages temporels.

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Acronyms and Abbreviations

Aboriginal Groups or Indigenous Nations	Aboriginal Groups include: Lhoosk'uz Dené Nation, Ulkatcho First Nation, Nadleh Whut'en First Nation, Stellat'en First Nation, Saik'uz First Nation, and Nazko First Nation
AEMP	Aquatic Effects Monitoring Program
AQDMP	Air Quality and Fugitive Dust Management Plan
Artemis	Artemis Gold Inc.
ARU	Autonomous Recording Unit
BC	British Columbia
Blackwater or Project	Blackwater Project or Blackwater Gold Project
BMP	Best Management Practice
BW Gold	BW Gold LTD.
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
CFMP	Country Foods Monitoring Plan
CM	Construction Manager
CMMP	Caribou Mitigation and Monitoring Plan
CMSTHP	Chemicals and Materials Storage, Transfer and Handling Plan
Code	Health, Safety and Reclamation Code for Mines in British Columbia
COO	Chief Operating Officer
CPB	Call Playback
CPD	Certified Project Description
DFO	Fisheries and Oceans Canada
DS	Decision Statement
EAC	Environmental Assessment Certificate
EAO	BC Environmental Assessment Office
ECCC	Environment and Climate Change Canada
EIR	Environmental Incident Report
EM	Environmental Manager
EMLI	Ministry of Energy, Mines and Low Carbon Innovation
EMS	Environmental Management System
ENV	Ministry of Environment and Climate Change Strategy
ESC	Erosion and Sediment Control
FLNRORD	Ministry of Forests, Lands, Natural Resource Operations, and Rural Development
FMSCP	Fuel Management and Spill Control Plan
FSR	Forest Service Road
FUP	Annual Follow-up Program Report
FWR	Freshwater Reservoir
GM	General Manager
IECD	Interim Environmental Control Dam
IFC	Issued for Construction
Indigenous groups or Aboriginal Peoples	Lhoosk'uz Dené Nation, Ulkatcho First Nation, Nadleh Whut'en First Nation, Saik'uz First Nation, Stellat'en First Nation, Nazko First Nation, Skin Tyee Nation, Tŝilhqot'in Nation, Métis Nation British Columbia, and Nee-Tahi-Buhn Band (as defined in the Project's federal Decision Statement)
JAIR or Joint MA/EMA Application	Joint Application Information Requirements for Mines Act and Environmental Management Act Permits
km	Kilometer
kV	Kilovolt
LDN	Lhoosk'uz Dené Nation
LPU	Local Population Unit
LSA	Local Study Area
m	Meter
MAR	Mine Access Road
MASL	Meters above sea level

MERP	Mine Emergency Response Plan
ML/ARD	Metal Leaching/Acid Rock Drainage
ML/ARDMP	Metal Leaching/Acid Rock Drainage Management Plan
MNBC	Métis Nation British Columbia
MSDP	Mine Site Water and Discharge Monitoring and Management Plan
MSTCP	Mine Site Traffic Control Plan
Mtpa	Million tonnes per annum
NAG	Non acid generating
New Gold	New Gold Inc.
NFN	Nazko First Nation
NPR	Neutralization potential ratio
NTBIB	Nee-Tahi-Buhn Band
NTU	NTU Nephelometric turbidity unit
NVMP	Noise and Vibration Effects Monitoring and Mitigation Plan
PAG	Potentially acid generating
PASS	Passive Air Sampling System
PCR	Project Completion Report
PFZ	Pesticide Free Zone
PPE	Personal Protective Equipment
QA/QC	Quality assurance/quality control
QP	Qualified Professional
RCP	Reclamation and Closure Plan
RMA	Riparian Management Area
RoW	Right-of-Way
SCP	Sediment Control Pond
SEPSCP	Surface Erosion Prevention and Sediment Control Plan
SMP	Soil Management Plan
SOP	Standard Operating Procedure
STN	Skin Tyee Nation
t/d	Tonnes/day
TARP	Trigger Action Response Plan
TNG	Tsilhqot'in Nation
TSF	Tailings Storage Facility
TSS	Total suspended solids
UFN	Ulkatcho First Nation
VMP	Vegetation Monitoring Plan
VP	Vice President
WMMP	Wildlife Mitigation and Monitoring Plan
WMOP	Wetland Management and Offsetting Plan
WMP	Waste (Refuse and Emissions) Management Plan
WPMP	Whitebark Pine Management Plan
WTP	Water Treatment Plant

1 Introduction

The Blackwater Gold Project (the Project) is a gold and silver open pit mine currently under construction in central British Columbia (BC), approximately 112 kilometers (km) southwest of Vanderhoof, 160 km southwest of Prince George, and 446 km northeast of Vancouver (Figure 1-1).

The Project is presently accessed via the Kluskus Forest Service Road (FSR), the Kluskus-Ootsa FSR and an exploration access road, which connects to the Kluskus-Ootsa FSR at km 142. The Kluskus FSR joins Highway 16 approximately 10 km west of Vanderhoof. A new, approximately 13.8 km road (Mine Access Road; MAR) will be built to replace the existing exploration access road, which will be decommissioned. The planned new access is at km 124.5 km on the Kluskus FSR. Driving time from Vanderhoof to the mine site takes roughly 2.5 to 3 hours depending on traffic and road conditions.

Major mine components include a tailings storage facility (TSF), ore processing facilities, waste rock, overburden and soil stockpiles, borrow areas and quarries, water management infrastructure, water treatment plants, accommodation camps and ancillary facilities (Figure 1-2). The gold and silver will be recovered into a gold-silver doré product and shipped by air and/or transported by road. Electrical power will be supplied by a new approximately 135 km, 230 kilovolt (kV) overland transmission line that will connect to the BC Hydro grid at the Glenannan substation located near the Endako mine, 65 km west of Vanderhoof.

The Blackwater mine site is located within the traditional territories of Lhoosk'uz Dené Nation, Ulkatcho First Nation, Skin Tyee Nation and Tsilhqot'in Nation. The Kluskus and Kluskus-Ootsa FSRs and Project transmission line cross the traditional territories of Nadleh Whut'en First Nation, Saik'uz First Nation, and Stellat'en First Nation (collectively, the Carrier Sekani First Nations) as well as the traditional territories of the Nazko First Nation, Nee-Tahi-Buhn Band, Cheslatta Carrier Nation and Yekooche First Nation (BC EAO, 2019a) (BC EAO, 2019b).

Project construction is anticipated to take two years. Mine development will be phased with an initial milling capacity of 15,000 tonnes per day (t/d) or 5.5 million tonnes per annum (Mtpa) for the first five years of operation. After the first five years, the milling capacity will increase to 33,000 t/d or 12 Mtpa for the next five-years, and to 55,000 t/d or 20 Mtpa in Year +11 until the end of the 23-year mine life. The Closure phase is from Year +24 to approximately Year +45, ending when the Open Pit has filled to the target closure level and the TSF is allowed to passively discharge to Davidson Creek via a closure spillway. Post-closure phase begins in Year +46.

New Gold Inc. (New Gold) received Environmental Assessment Certificate #M19-01 (EAC) on June 21, 2019 under the 2002 *Environmental Assessment Act* (BC EAO, 2019c) and a Decision Statement (DS) on April 15, 2019 under the *Canadian Environmental Assessment Act, 2012* (CEA Agency, 2019). In August 2020, Artemis Gold Inc. (Artemis) acquired the mineral tenures, assets and rights in the Blackwater Project that were previously held by New Gold Inc. On August 7, 2020, the Certificate was transferred to BW Gold LTD. (BW Gold), a wholly owned subsidiary of Artemis, under the 2018 *Environmental Assessment Act*. The Impact Assessment Agency of Canada notified BW Gold on September 25, 2020, to verify that written notice had been provided within 30 days of the change of proponent as required in Condition 2.16 of the DS, and that a process had been initiated to amend the DS.

This is the Blackwater Gold Mine annual follow-up program (FUP) report for the April 1, 2022 – March 31, 2023, reporting period (reporting period), required pursuant to the federal Environmental Assessment (EA) process.

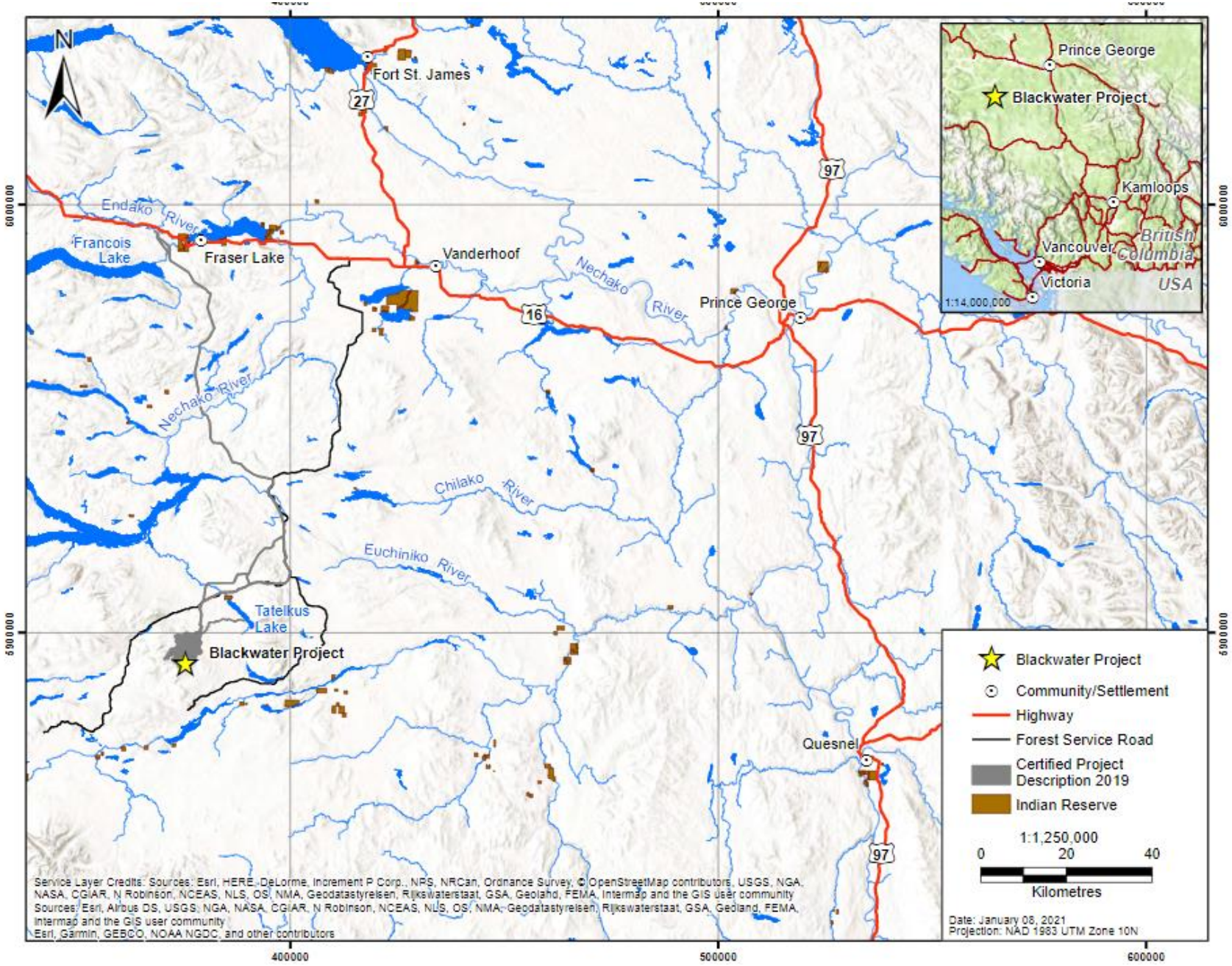

Figure 1-1: Project location

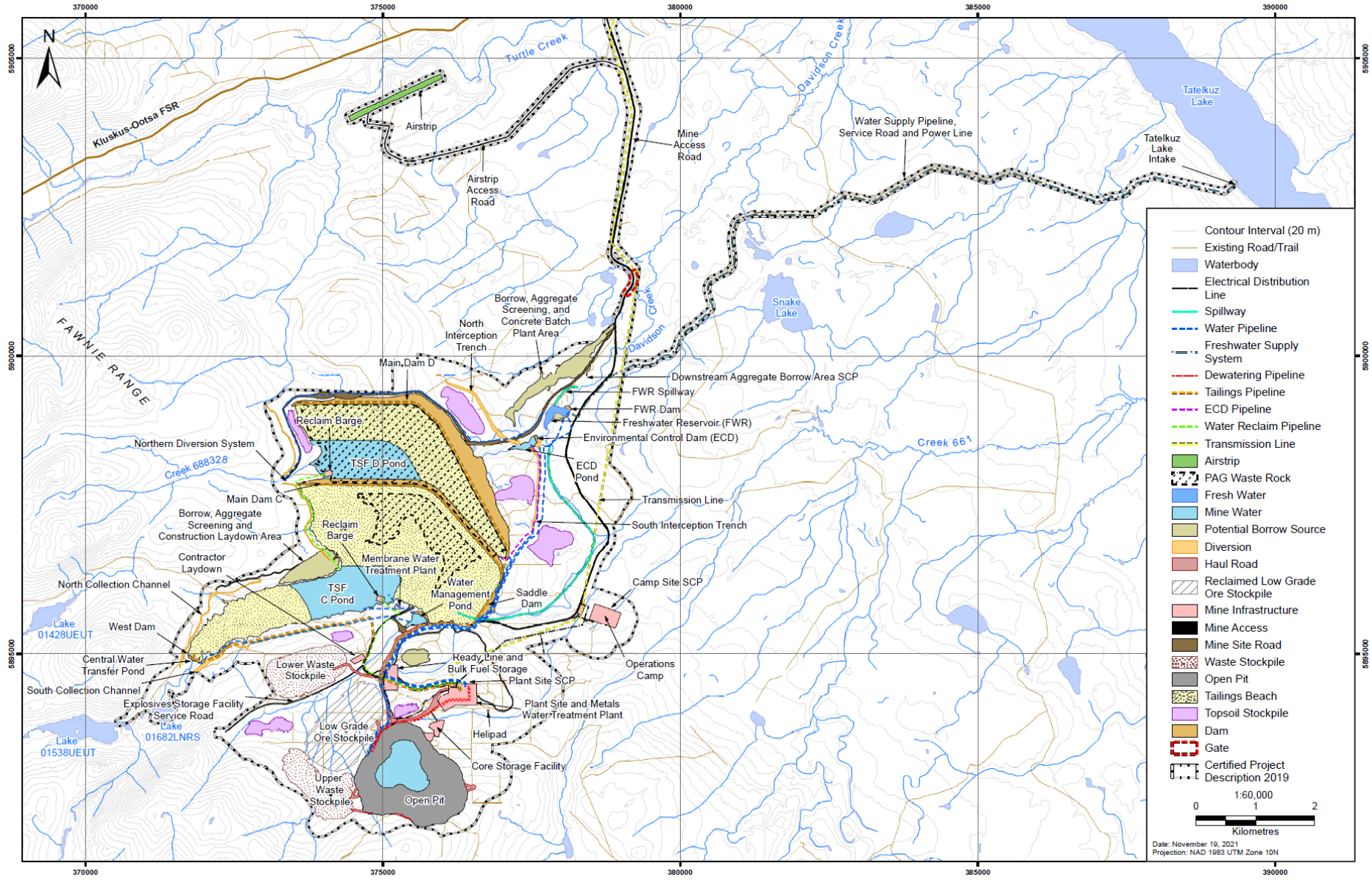

Figure 1-2: Overview of planned Project works

1.1 Project Activities

From January to September 2022, the Project was in the baseline (pre-construction) phase. Limited early works construction activities began in October 2022 concentrated in the proposed plant site area. These early works were the focus of activities as approval of major works was pursued through the Joint Mines Act/Environmental Management Act Permit process. Approval through the Mines Act was received on March 8th, 2023, while Environmental Management Act (EMA) permits for release of mine effluent and authorizing air emissions were received from the BC Ministry of Environment (ENV) in May 2023. There were no discharges to surface water from the Project during this reporting period.

Table 1-1 provides an overview of those activities through to March 31, 2023. Prior to the March 8th, 2023, issuance of the amendment to Mines Act Permit M-246 approving the mine plan and reclamation program, construction activities focused on site preparation.

A summary of specific activities undertaken to satisfy conditions of the DS conditions is presented in Appendix 14.

Table 1-1: Summary of 2022 Construction Phase activities

Component/Activity	Description	Activities Competed October 1 – March 31, 2023
Mine Access Road	• Kluskus-Ootsa Forest Service Road (FSR) km 124.5 plant site • Kluskus-Ootsa FSR to Mine Site boundary to be permitted under Special Use Permit • Mine Site boundary to mine site terminus to be permitted under Mines Act • 16 km single lane • Balanced cut and fill; no bedrock excavation/blasting • Located on mineral tenure held by BW Gold • Approximately 100 ha of disturbance; partially cleared	• No works completed
Mine Access Road Bridges	• Bridge 1: Steel concrete composite on precast spread footing • Bridge 2: Slab girder bridge on precast spread footing • Bridge 3: Skewed precast composite concrete deck panel. Steel superstructure. Precast concrete spread footings. • Bridge 4: Skewed precast concrete slab bridge. Precast spread footings. • Bridge 5: Skewed precast concrete slab bridge. Precast concrete spread footings.	• No works completed
Mine Site Roads (include mine haul roads, mine site service roads, exploration road upgrade within mine site)	• Clearing, grubbing and construction of roads to proposed Early Works on mine site. • Approximately 178.9 ha of disturbance • Estimated 7 clear-span bridges for fish stream crossings. • No bedrock excavation/blasting	• Clearing activities initiated in March 2023

Borrow Sources	• Clearing of trees for two borrow sources:
	  ○ Within footprint of the future Environmental Control Dam area – approximately 13.7 ha of disturbance.
	  ○ Southern borrow in TSF – approximately 7.5 ha of disturbance
		• A Borrow Pit located at 135KM on the Kluskus FSR was used as a source of gravel and rip rap.

Tailings Storage Facility (TSF)	• Clearing of trees in:
	  ○ TSF Site C dam footprint: 109.8 ha
	  ○ Aggregate screening site: 9.3 ha
		• Clearing activities initiated in March 2023

Water Management Structures	• Clearing of trees along water diversion channel route northeast of Site C starter dam: 47.1 ha of surface disturbance	• Clearing activities initiated in March 2023 • Plant site ditches and sediment pond earth works. • Installation of RIBs (Rabid Infiltration Basins)
Ore Stockpile Sites	• Adjacent to open pit and plant site • Clearing of trees • Future low grade ore stockpile base 4.5 ha of surface disturbance • Future high grade ore stockpile base 3.1 ha of surface disturbance	• Clearing activities initiated in March 2023
Open Pit and Overburden Dump Sites	• Clearing trees • Open pit stripping of overburden on 20.5 ha • Stockpile pit stripping overburden on 11.1 ha of surface disturbance	• Clearing activities initiated in March 2023
Water Supply	• Groundwater well east of camp provides sufficient water for portable water treatment plant for potable water. • If necessary, a second groundwater well will be drilled in this location. • No additional site clearing required	• Received Section 10 Short Term Use Approval under the Water Sustainability Act, for temporary use of TW-13-01 (File 7003004). Works began on piping.
Ancillary Building Sites	Clearing at multiple sites: • Explosives magazine site: 3.1 ha of surface disturbance • Truck shop and mine offices: 18.6 ha of surface disturbance • Operational camp: 33.9 ha of surface disturbance • Existing 250-person camp: 0 ha	• Preparing existing camp for expanded use (additional dorms, arctic corridor, snow roofs, utilities).
Plant Site	• Clearing, grubbing, site levelling, soil, overburden salvage. No bedrock excavation/blasting: ○ Plant site: 26.4 ha of surface disturbance	• Clearing, grubbing, cut to fill. The full 26.4 ha was cleared, excluding the wetland, which was buffered and flagged. • Additional earthworks and procurement in preparation of major works construction.

1.2 Report Scope and Navigation

On April 15, 2019, the Project was issued the DS (CEA Agency, 2019). Condition 2.11 of this document requires the development of an annual report summarizing the implementation of a number of monitoring programs (Table 1-2). This follow-up report has been developed to comply the following conditions:

> **2.11.** The Proponent shall, commencing in the reporting year during which the Proponent begins the implementation of the conditions set out in this Decision Statement, prepare an annual report that sets out:
>
> > ***2.11.1*** the activities undertaken by the Proponent in the reporting year to comply with each of the conditions set out in this Decision Statement;
> >
> > ***2.11.2*** how the Proponent complied with condition 2.1;
> >
> > ***2.11.3*** for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation, including a rationale for how the views have, or have not, been integrated;
> >
> > **2.11.4** The information referred to in conditions 2.5 and 2.6 for each follow-up program;
> >
> > **2.11.5** The results of the follow-up program requirements identified in conditions 3.14, 3.15, 3.16, 4.5, 5.5, 6.11, 6.12, 6.13, 6.14, 8.18.6, 8.20.5, 8.21, and 8.22 if required;
> >
> > **2.11.6** Any update made to any follow-up program in the reporting year;
> >
> > **2.11.7** Any modified or additional mitigation measures implemented or proposed to be implemented by the Proponent, as determined under condition 2.9 and rationale for why mitigation measures were selected pursuant to condition 2.5.4; and
> >
> > ***2.11.8*** Any change(s) to the Designated Project in the reporting year.

As reflected in the headers of Table 1-2 below, several conditions have been addressed in the body of this report. Exceptions to this have been italicized in the list above.DS conditions 2.11.1 and 2.11.8 have been addressed in Appendix 14, DS condition 2.11.2 has been addressed in Section1.4, while DS condition 2.11.3 is summarized in the *2022 BW Gold Consultation Report* (Appendix 1).

As described in Section 1.1 limited early works activities occurred in 2022 with the Project entering the construction phase in October 2022. For this reason, the follow-up reports summarized in this document (Table 1-2) include work done to continue baseline and ongoing compliance monitoring in 2022 (January – September 2022). It is noted that the small amount of time in which the Project was in construction, limited the ability to detect environmental change relative to baseline conditions in 2022 and early 2023, per condition 2.5.4 cited by condition 2.11.7. Comparisons have been made to the extent feasible, as determined by the appropriate Qualified Professionals (QP). In summary, this report presents those monitoring activities from relevant monitoring programs between January 1, 2022, and March 31, 2023. Further context on information collected January 1– March 31, 2023, is presented in Section 1.3.2.

Table 1-2: DS condition navigation summary

Condition No.	Condition	Section (DS 2.11.4, 2.11.5, 2.11.6, 2.11.7, 2.11.8)	Appendix
3.14	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Fisheries and Oceans Canada, and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall…	2 Fish and Fish Habitat (3.14)	Appendix 2: FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report Appendix 3: Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report
3.15	The Proponent shall develop, in consultation with Indigenous groups and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish habitat in Davidson Creek, Creek 661 and Chedakuz Creek. The Proponent shall develop the follow-up program prior to construction and shall implement the follow-up program during all phases of the Designated Project. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall…	3 Water Quality and Quantity (3.15)	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report Appendix 4: Follow-up Programs for Condition 3.15 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012
3.16	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to fish habitat in Tatelkuz Lake and Chedakuz Creek. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall:	4 Fish Habitat (3.16)	Appendix 2: FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report
4.5	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The follow-up program shall include the mitigation measures used to comply with condition 4.1 to 4.4. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	5 Migratory Birds (4.5)	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report
5.5	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the predictions of the environmental assessment as it pertains to the adverse environmental effects of the Designated Project on wetland functions and to determine the effectiveness of the mitigation measures as it pertain to wetlands. The Proponent shall implement the follow-up program during from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall…	6 Wetlands (5.5)	Appendix 9: Wetland Mapping and Assessment Baseline
6.11	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples caused by changes in concentrations of contaminants of potential concern in water, soil, vegetation and wildlife, including fish, and determine the effectiveness of mitigation measures. As part of the development of the follow-up program, the Proponent shall identify the vegetation and wildlife species that shall be monitored, the locations where the monitoring will be conducted, the contaminants to be monitored and the frequency of the monitoring. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. In doing so, the Proponent shall…	7 Country Foods (6.11) (6.13)	Appendix 7: Country Food Monitoring Plan Annual Report 2022
6.12	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples as a result of changes to air quality and determine the effectiveness of mitigation measures. As part of the implementation of the follow-up program, the Proponent shall monitor nitrogen dioxide (NO_2), sulfur dioxide (SO_2), fine particulate matter ($PM_{2.5}$), particulate matter (PM_{10}), dust, and carbon monoxide (CO) in air. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply	8 Air Quality (6.12)	Appendix 6: Air Quality and Fugitive Dust Management Annual Report 2022 Appendix 11: Air Quality Monitoring

Condition No.	Condition	Section (DS 2.11.4, 2.11.5, 2.11.6, 2.11.7, 2.11.8)	Appendix
	conditions 2.9 and 2.10 when implementing the follow-up program.		January – March 31, 2023
6.13	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the socio-economic conditions of Indigenous Peoples as a result of changes to access, availability and quality of country foods. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	7 Country Foods (6.11) (6.13)	Appendix 8: 2022 Country Foods and Socio-economic Conditions Follow-up Program: Current Conditions Report
6.14	The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, develop a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse effects from the Designated Project on moose (*Alces alces*) and determine the effectiveness of mitigation measures. As part of the implementation of the follow-up program, the Proponent shall conduct winter distribution and density surveys for moose (*Alces alces*) starting prior to construction and until the end of operation. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	9 Effects on Moose (6.14)	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report Appendix 12: Wildlife Monitoring January 1 – March 31, 2023
8.18.6	A description of the follow-up program the Proponent shall implement to determine the effectiveness of the mitigation measures included in the compensation plan. As part of the development of the follow-up program, the Proponent shall determine, in consultation with Indigenous groups, the methods, timing and frequency for conducting winter surveys for caribou abundance and distribution within the Designated Project area. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	10 Effects on Caribou (8.18.6)	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report Appendix 12: Wildlife Monitoring January 1 – March 31, 2023
8.20.5	Develop and implement a follow-up program in consultation with Indigenous groups to determine the effectiveness of the mitigation measures included in the whitebark pine management plan. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program. The follow-up program shall include…	11 Whitebark Pine (8.20.5)	Appendix 10: BW Gold Whitebark Pine Field Update – 2022 Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report
8.21	The Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to the effects of changes caused by the Designated Project on western toad (*Anaxyrus boreas*). The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall…	12 Effects on Western Toad (8.21)	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report
8.22	The Proponent shall develop, in consultation with Indigenous groups, and implement a follow-up program to monitor little brown myotis (*Myotis lucifugus*) and northern myotis (*Myotis septentrionalis*) usage of buffer zones established pursuant to condition 8.14 and roosting structures installed and maintained by the proponent pursuant to condition 8.15 to determine the effectiveness of the mitigation measures. The Proponent shall implement the follow-up program during construction and operation and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	13 Effects on Bats (8.22)	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report

1.3 Previous Submissions

BW Gold has made two (2) prior submissions that have influenced the content of this report. Details on these are provided below, however in both instances the IAAC and BW Gold were able to effectively communicate and align on next steps and required deliverables.

1.3.1 Pre-construction Compliance Summary

In September 2022 BW Gold submitted a pre-construction compliance document report submission pursuant to DS condition 11.3 and 11.4 which required:

- Updates to the schedules referred to in DS 11.1 and 11.2 no later than September 30 each year; and;
- Updates to the schedules referred to in DS 11.1 and 11.2 upon revision of the schedules.

As a result of a miscommunication and mislabeling of the electronic submission, this submission was interpreted as the annual report required for submission by condition 2.11. Following a detailed review of this submission with the understanding that it was the annual report, IAAC provided a series of information requests to BW Gold intended to address the perceived gaps (Hess, 2023). In subsequent communications, the misunderstanding associated with this submission was resolved and the information requests were rescinded with the understanding that they would be considered in the development of the annual report. In acknowledgement of that commitment, the information requests relevant to those conditions associated with this report have been summarized and addressed in Table 1-3.

Table 1-3: March 2023 information requests

Condition No.	Information Request	Response
2.3.2, 3.14	Provide the consultation records related to DFO's review of the follow-up program for condition 3.14 (e.g., BW Gold's communications to DFO requesting their review and outlining the deadline for comment).	Appendix 1: 2022 BW Gold Consultation Report
5.5, 5.5.1, 5.5.2, 5.5.3	a. Update the Wetland Management and Offsetting Plan (the follow-up program required by condition 5.5) to specify that "early works" are not exempt from follow-up requirements as per condition 5.2. b. Provide wetland survey results showing the location of red or blue listed wetlands within the mine site, as per condition 5.5.1. c. State when wetland monitoring commenced, and, if applicable, describe monitoring results for the 2021-22 reporting year as required by conditions 5.5.2, 5.5.3, and 2.11.5.	a. Condition 5.2 will be incorporated into the next schedule update of the *Wetland Management and Offsetting Plan* b. Section 6 Wetlands (5.5) c. Section 6 Wetlands (5.5)
6.14	Confirm the dates of the winter distribution and density surveys for moose that were conducted prior to construction as per condition 6.14 and provide the results of the surveys for the 2021-22 reporting year as required by condition 2.11.5.	Section 9 Effects on Moose (6.14)
8.16, 8.18, 8.18.4, 8.18.6	a. Indicate where the "schedule for implementation" is found for nonhabitat measures to be implemented, as required by condition 8.18.4. b. Identify where "the methods, timing and frequency for conducting winter surveys for caribou abundance and distribution within the Designated Project area" is located within the Caribou Mitigation and Monitoring Plan, as required by condition 8.18.6.	Section 10 Effects on Caribou (8.18.6)
8.20, 8.20.3, 8.20.5, 8.20.5.2	a. Identify the locations to plant whitebark pine (*Pinus albicaulis*) in undisturbed areas within the Designated Project area within the Whitebark Pine Management Plan, as required by sub-condition 8.20.3. b. Clarify how the "adequacy" of monitoring results will be determined regarding the monitoring of use of the reclaimed areas by Clark's nutcracker as required by condition 8.20.5.2.	a. See Figure 8.1-3 of the *Whitebark Pine Management Plan* (ERM, 2022h) b. See Section 10.2 of the *Whitebark Pine Management Plan* (ERM, 2022h)
2.5, 2.5.4, 8.21, 8.21.1	a. Indicate in the Wildlife Mitigation and Monitoring Plan the levels of environmental change relative to baseline conditions that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities to be stopped, for the follow-up monitoring for Western Toad, as required by condition 2.5.4. b. Provide the results of the annual western toad survey for the 2021- 22 reporting year, indicating whether toad breeding ponds were identified and their locations. c. Provide an unsecured, machine-readable version of the Wildlife Mitigation and Monitoring Plan for IAAC review purposes.	Section 12 Effects on Western Toad (8.21) Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report

1.3.2 2022 Blackwater Gold Mine Annual DS Follow-Up Report

On September 15, 2023, BW Gold submitted the 2022 Blackwater Gold Mine Annual DS Follow-Up Report which covered January – December 2022. IAAC responded to this submission noting that the reporting period defined by the FDS specifies April 1 – March 31. A path towards addressing the reporting gap was discussed with IAAC on September 27th and a summary of next steps was subsequently provided by BW Gold on September 30th.

This submission represents the revised version of the initial September 15th report submission and summarizes the results of the relevant monitoring programs between January 2022 – March 31, 2023.

It should be noted that not all reports presented in the appendices required revisions to reflect the updated reporting period. Table 1-4 below, summarizes the reporting year for each appendix.

As an additional consideration, many of the follow up programs referenced by condition 2.11 of the FDS have been developed to comply with conditions associated with the provincial authorizations, as well as these federal conditions as an initiative to simplify and streamline reporting as well as to prevent duplication of data and Indigenous Nation review efforts and resources required. The provincial reporting period for those documents, listed below, is January – December, annually.

- Accidents and Malfunctions Admin and Communications Plan;
- Air Quality and Fugitive Dust Management Plan;
- Aquatic Effects Monitoring Plan;
- Construction and Environmental Management Plan;
- Country Foods Monitoring Plan
- Cultural and Spiritual Resources Management Plan;
- Invasive Plant Management Plan;
- Mine Site Water and Discharge Monitoring and Management Plan;
- Noise and Vibration Effects Monitoring and Mitigation Plan
- Surface Erosion Prevention and Sediment Control Plan; and,
- Wildlife Mitigation and Monitoring Plan;

Table 1-4: Summary of reporting period by appendix.

Appendix	Reporting Period	Note
Appendix 1: 2022 BW Gold Consultation Report	April 1, 2022 – March 31, 2023	N/A
Appendix 2: FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report	March 1, 2022 – March 31, 2023	Report updated to include January 1 – March 31, 2023
Appendix 3: Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report	May 2021 - March 2022	No change needed. Provides Lake 15/16 parasite and pathogen inventories required by DS condition 3.14.1. Work was complete in March 2022.
Appendix 4: Follow-up Programs for Condition 3.15 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012	October 2022 - March 2023	Report updated to include January 1 – March 31, 2023
Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report	January 2022 - December 2022	Summary of January 1 – March 31, 2023 monitoring provided in Appendix 12.
Appendix 6: Air Quality and Fugitive Dust Management Annual Report 2022	January 2022 - December 2022	Summary of January 1 – March 31, 2023, monitoring provided in Appendix 11.
Appendix 7: Country Food Monitoring Plan Annual Report 2022	October 2022 - December 2022	No change needed. Monitoring for this program did not occur between January 1 and March 31, 2023.
Appendix 8: 2022 Country Foods and Socio-economic Conditions Follow-up Program: Current Conditions Report	August 2021 - September 2021	No change needed. This report summarizes baseline conditions.
Appendix 9: Wetland Mapping and Assessment Baseline	January 2022 - December 2022	No change needed. This report summarizes baseline conditions.
Appendix 10: BW Gold Whitebark Pine Field Update – 2022	January 2022 - December 2022	No change needed. Monitoring for this program did not occur between January 1 and March 31, 2023.
Appendix 11: Air Quality Monitoring January – March 31, 2023	January 1, 2023 – March 31, 2023	Summary of air quality monitoring that occurred between January 1 and March 31, 2023.
Appendix 12: Wildlife Monitoring January 1 – March 31, 2023	January 1, 2023 – March 31, 2023	Summary of wildlife monitoring that occurred between January 1 and March 31, 2023.
Appendix 13: January 1 – March 31, 2023 Pre-Clearing Surveys	January 1, 2023 – March 31, 2023	Pre-clearing surveys done in Q1 2023.
Appendix 14: Summary of DS Condition Activities (2.11.1)	April 1, 2022 – March 31, 2023	N/A

1.4 Implementation (2.1)

As required by DS condition 2.1 BW Gold has continued to design, permit, and construct the Project in a manner that considers and incorporates corporate standards and policies, the expertise of the selected consulting firms, continued involvement of a team of QPs, and ongoing engagement with Indigenous groups.

> **2.1.** The Proponent shall ensure that its actions in meeting the conditions set out in this Decision Statement during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge available at the time the Proponent takes action (including community and Indigenous traditional knowledge), are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available economically and technically feasible technologies.

QPs have developed and supported in the implementation of those programs that make up the basis of this document. Signatures have been provided on those finalized documents and reflect the requirements of this condition.

Appendix 1 outlines engagement that occurred in the development of these programs.

1.5 Consultation (2.12)

As required by condition 2.12, the *2022 Blackwater Gold Mine Annual DS Follow-Up Report* was provided in draft to Indigenous groups on June 30th, 2023, to facilitate consultation on the content and findings of the document.

> **2.12** The Proponent shall provide a draft annual report referred to in condition 2.11 to Indigenous groups, no later than June 30 following the reporting year to which the annual report applies. The Proponent shall consult Indigenous groups on the content and findings in the draft annual report.

Comments from Carrier Sekani First Nations were received July 31st, 2023, and discussed with the nation on September 13th, 2023. These comments related to fish and fish habitat, referring to the follow up programs for FDS Conditions 3.14, 3.15, and 3.16, as well as the *FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report*. Many of those comments received were addressed through small clarifications, such as reference to the appropriate section of a follow-up program. Opportunities to clarify wording in future iterations of the follow-up programs were identified as well, however no changes to those reports appended to this document have been made.

Following the reporting period revision of this document (Section 1.3.2), this report was re-issued to Indigenous groups on October 12th, 2023, for consultation. This process focused on those updates made to the document guided by a change log provided for reference. No comments were received during this 15 day review period.

An additional review period occurred following the finalization of the revised *Follow-up Programs for Condition 3.15 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012* (Appendix 4). This was incorporated into the annual report and these changes were provided to Indigenous groups for review on November 3rd, 2023. No comments were received during the 15 day review period.

BW Gold has developed those follow-up programs and the associated management plans described in this document in consultation with those nations. Appendix 1 provides a summary of this activity for context.

2 Fish and Fish Habitat (3.14)

The fish and fish habitat *Follow-up Program for Condition 3.14 of the Blackwater Gold Project* (Palmer, 2023b) was developed to address the conditions outlined in condition 3.14 of the DS. It was designed to first characterize baseline conditions for each of the indicators listed in the condition, and then monitor those indicators during all phases of the Project to determine, to the extent possible, if:

a) Variation from baseline conditions is occurring;

b) Mitigation measures are effective;

c) If the environmental assessment was accurate in terms of anticipated effects on the indicators; and,

d) Determine if additional mitigations should be taken pursuant to Condition 2.9.

Based on the progress of the project to date (Section 1.1), the field programs summarized in this report collected information intended to represent a pre-construction updated baseline for fish and fish habitat to inform long-term monitoring under this condition. The programs and their results are presented in those documents listed below:

- *FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report* (Appendix 2), which summarizes the monitoring and results of the program for 2022.
- *Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report* (Appendix 3), which outlines the field surveys that occurred in 2021, including winter surveys into March 2022 that are relevant to this section.

This section provides an overview of monitoring, results, and adaptive management that occurred during the reporting period to support compliance with DS 3.14. Full details can be reviewed in the documents listed above. Table 2-1 below summarizes this condition of the DS and where the full details can be found in the associated appendix of this document.

Table 2-1: DS condition 3.14 follow-up monitoring

Condition No.	Condition	Appendix	Section
3.14.	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Fisheries and Oceans Canada, and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall:	Described in the *Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012* (Palmer, 2023b)	
3.14.1.	Conduct parasite and pathogen inventories in Lake 01538UEUT and Lake 01682LNRS prior to enlarging Lake 01682LNRS and connecting it to Lake 01538UEUT pursuant to condition 3.13 and compare the results of the parasite and pathogen inventories for the two lakes;	Described in the *Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012* (Palmer, 2023b)	Complete in 2021 (Palmer, 2023b).
3.14.2.	Monitor, starting when the Proponent starts to pump water into Davidson Creek and continuing through until the freshwater supply system has been decommissioned, rainbow trout (*Oncorhynchus mykiss*) and Kokanee (*Oncorhynchus nerka*) populations in Davidson Creek, including	Appendix 2: FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report	2.1 Davidson Creek
3.14.2.1.	Community composition of rainbow trout (*Oncorhynchus mykiss*) and Kokanee (*Oncorhynchus nerka*), their absolute abundance, genetic structure and diversity;		2.1.2 Young-of-the-year and Juvenile Rainbow Trout Abundance 2.1.7 Rainbow Trout and Kokanee Genetic Structure
3.14.2.2.	Absolute abundance of overwintering rainbow trout juveniles; and		2.1.1 Overwintering Rainbow Trout Abundance 2.1.3. Rainbow Trout Adult Spawner Abundance
3.14.2.3.	Characteristics of spawner populations through surrogate monitoring metrics including size at 50% maturity, redd counts and spawner distribution.		2.1.4 Kokanee Adult Spawner and Redd Abundance 2.1.5 Kokanee Fry Outmigration 2.1.8 Dissolved Free Amino Acids Sampling

2.1 Monitoring and Analysis

As outlined in Table 2-1 above, detailed regarding the reporting period monitoring activities done in support of condition 3.14 are provided in Appendix 2 and Appendix 3. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 2-2 below summarizes the monitoring results and recommendations for work done in Davidson Creek, it also specifies where further information on each item can be found in the Appendices.

Monitoring for parasites and pathogens in Lake 15 and 16, as required by DS condition 3.14.1. is occurred in September 2021 and is summarized in the *Follow-up Program for Condition 3.14 of the Blackwater Gold Project* (Palmer, 2023b). The study concluded that parasites and pathogens causing disease in fish are not present in Lake 15 or 16, and that no additional monitoring is required (Palmer, 2023b).

No adaptive management was required. Monitoring will continue as described in the *Follow-up Programs for Condition 3.14 of the Blackwater Gold Project* (Palmer, 2023b), with a few changes in the approach to monitoring. These changes are summarized in Table 2-1.

Table 2-2: Summary of DS condition 3.14 follow-up monitoring

Monitoring	Survey /Methodology	Dates	Results Summary	Adaptive Management/Recommendations
Overwintering Rainbow Trout Abundance	**Appendix 3, Section 2.2.2.1**	March 2022 (Palmer, 2022a)	**Appendix 3, Section 2.2.2.2** Fish were caught using minnow trapping at five of the six survey locations and a total of seven Rainbow Trout were captured. CPUE at the six overwintering survey locations was low, ranging from 0 to 0.021 fish per trap-hour. (Palmer, 2022a)	
	Appendix 2, Section 2.1.1.1	March 3 – 14, 2023 (Palmer, 2023a)	**Appendix 2, Section 2.1.1.2** Underwater camera deployment was used to determine Rainbow Trout presence and estimate abundance in (7) seven overwintering sites. Initially ten sites had been considered, however three could not be monitored as they had frozen to the bottom. Fish were observed on video footage at two sites. The max N value at the two sites ranged from 3 to 4. (Palmer, 2023a)	
Young -of-the-year and juvenile Rainbow Trout Abundance	**Appendix 2, Section 2.1.2.1** Summer low-flow survey (Palmer, 2023a)	July 21 – August 28. 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.2.2.1** A total of 176 Rainbow Trout and 1 adult kokanee were captured from electrofishing efforts at all ten sites. The CPUE ranged from 0.12 to 2.56 fish per 100 s of electrofishing effort. (Palmer, 2023a)	**Appendix 2 Section 3.0** To eliminate the potential for bias due to temporal mismatch and provide an understanding of population structure by age, subdivide and evaluate juvenile Rainbow trout abundance by age class rather than pooling catch. (Palmer, 2023a)
	Appendix 2, Section 2.1.2.1.2 Pre-winter survey (Palmer, 2023a)	October 2 – 9, 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.2.2.2** A total of 261 Rainbow Trout were captured from electrofishing efforts at the six sites. These fish were predominantly less than one year old based on measured size. The CPUE ranged from 1.32 fish per 100 s of electrofishing effort to 2.65 fish per 100 s of electrofishing effort. (Palmer, 2023a)	
	Appendix 2, Section 2.1.2.1.4 Mark-recapture pilot study (Palmer, 2023a)	July 21 – 22, 2022 October 4 – 5, 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.2.2.4** During initial sampling at Site DC-1 for the summer survey, a total of 8 fish were captured and marked on day 1, and a total of 2 fish were captured on day 2. None of the fish captured on day 2 were marked recaptures from day 1. During the initial sampling at Site DC-5 for the pre-winter survey, a total of 41 fish were captured and marked on day 1, and a total of 23 fish were captured on day 2. A total of 3 of the 23 fish captured on day 2 were marked recaptures from day 1. (Palmer, 2023a)	**Appendix 2 Section 3.0** Use closed-site depletion electrofishing instead of a mark-recapture survey for juvenile fish abundance surveys, as electrofishing has less uncertainty and is more efficient. (Palmer, 2023a)
Rainbow Trout adult spawner abundance	**Appendix 2, Section 2.1.3.1.1** Paired hoop net survey (Palmer, 2023a)	June 12 - 28 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.3.2.1** During a total fishing effort via trap (hoop) nets of 737.2 hours was completed at DC-8, resulting in the capture of 96 juvenile and 30 adult Rainbow Trout. CPUE is only reported for the adult fish captured, because the focus of this survey was on spawning migration. The average CPUE, measured as number of adult fish per net-hours, 0.04 at DC-8. (Palmer, 2023a)	**Appendix 2 Section 3.0** To improve data quality use an upstream and downstream facing rigid trap and fence instead of a mesh paired hoop net. To better capture the entire spawner migration period, shift the start date for the survey from mid-June to mid-May. (Palmer, 2023a)
	Appendix 2, Section 2.1.3.1.2 Visual spawner surveys (Palmer, 2023a)	June 20, 23, 26 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.3.2.2** One live Rainbow Trout was observed holding at DC-1 on June 20, 2022, and two live Rainbow Trout spawners were observed at DC-1 on June 26, 2022. No live or dead Rainbow Trout were observed at DC-8 on June 23, 2022, and no redds were observed during all three visual spawner surveys. The calculated linear and areal density of live Rainbow Trout counted at DC-1 was 0.40 fish per m and 0.07 fish per m2, respectively, on June 20, 2022, and 0.15 fish per m and 0.03 fish per m2 on June 26, 2022. (Palmer, 2023a)	**Appendix 2 Section 3.0** Eliminate visual spawner survey as a monitoring metric for spawner abundance as stream visibility and flow conditions are highly variable during the height of spawning run. (Palmer, 2023a)
Kokanee adult spawner and redd abundance	**Appendix 2, Section 2.1.4.1.1** Visual spawner surveys (Palmer, 2023a)	Mid-July to early October 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.4.2.1** This study encompassed the kokanee spawner migration such that 631 live fish were observed on the first survey day (July 22, 2022) and one live fish was observed on the last survey day (October 1, 2022). Among 16,827 cumulative live adult kokanee observations, 69.9%, 6.4%, 19.4%, and 4.3% of these occurred in Reach 1, Reach 2, Reach 3, and Reach 4, respectively. The linear and areal density of live kokanee ranged from 0 to 2.44 fish per m and 0 to 0.44 fish per m2, respectively. The linear and areal density of redds ranged from 0 to 0.29 fish per m and 0 to 0.05 fish per m2, respectively. The highest number of live kokanee counted in a single survey was 6,637 on August 30, which presumably represents a timepoint near peak spawning. A total of 254 spawned kokanee carcasses were recovered during the	**Appendix 2 Section 3.0** Exclude sections of reach 1 that have evidence of cattle instream activity from redd counts, as conditions do not allow for accurate counts. Combine holding and migration behaviours categories for visual spawner surveys instead of tallying the two separately, as they are difficult to distinguish. (Palmer, 2023a)

Monitoring	Survey /Methodology	Dates	Results Summary	Adaptive Management/Recommendations
			study period, including 67 males and 57 females among fish that were accurately sexed. (Palmer, 2023a)	
	Appendix 2, Section 2.1.4.1.2 Fish fence and underwater camera survey (Palmer, 2023a)	July 24 – September 8 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.4.2.2** Collectively, the number of adult kokanee migrating into Davidson Creek may have ranged from 1,223 to 1,493 in the daytime and 2,315 to 7,815 in the nighttime. (Palmer, 2023a)	**Appendix 2 Section 3.0** Implement a more modern, robust, and capable video monitoring system. (Palmer, 2023a)
	Appendix 2, Section 2.1.4.1.3 Trap net survey (Palmer, 2023a)	July 31 – August 1 2022 (Palmer, 2023a)	**Appendix 2**, **Section 2.1.4.2.2** A downstream-facing trap (hoop) net resulted in the capture of 108 fish (CPUE of 4.94 fish per net-hour). Of these, 77 were adult kokanee, 27 were adult rainbow trout and 4 were juvenile Longnose Sucker. (Palmer, 2023a)	
Kokanee fry outmigration	**Appendix 2, Section 2.1.5** (Palmer, 2023a)	June 15 – 19 2022 (Palmer, 2023a)	**Appendix 2, Section 2.1.5** Heavy debris accumulation occurred in the funnel net, only allowing for four days of operation during which no fish were captured. (Palmer, 2023a)	**Appendix 2 Section 3.0** Implement a novel floating trap and modified funnel net with increased cod-end dimensions to assess kokanee fry outmigration. (Palmer, 2023a)
Rainbow Trout and kokanee population dynamics	**Appendix 2, Section 2.1.6.1** (Palmer, 2023a)	June 12 - 28 2022 July 31 – August 1, 2022, (Palmer, 2023a)	**Appendix 2, Section 2.1.6.2** A total of 614 Rainbow Trout were captured in June 2022, 28 of which were spawning adults. Linear regression demonstrated a high correlation between weight and fork length, indicating proportional growth. Most Rainbow Trout captured in June 2022 had a measured fork length between 21 mm and 175 mm, which corresponds to four age class brackets, from Class 0 (i.e., young-of-the-year) to Class 3 (i.e., 3 years old). A total of 78 kokanee were captured in August 2022, 69 of which were considered to be spawning adults. Linear regression demonstrated a high correlation between weight and fork length, indicating proportional growth. Kokanee captured in August 2022 had a measured fork length between approximately 210 mm and 240 mm, which corresponds to an age class bracket of approximately three years old based on the mean length-at-age. (Palmer, 2023a)	
Rainbow Trout and kokanee genetic structure analysis	**Appendix 2, Section 2.1.6.1** (Palmer, 2023a)	June 13 – September 12, 2022, (Palmer, 2023a)	**Appendix 2, Section 2.1.7.2.** Completed genetic lab results for 2022 will be presented in the 2023 annual monitoring report for the 3.14 Follow-up Program. (Palmer, 2023a)	
Dissolved free amino acid sampling	**Appendix 2, Section 2.1.8.1** (Palmer, 2023a)	June 15 and August 17, 2022, (Palmer, 2023a)	**Appendix 2, Section 2.1.8.2.** Mean amino acid concentrations and standard deviations for 10 samples collected at DC-1 and 8 samples collected at DC-DFAA-US were identified. These results will be compared year-over-year to determine if changes occur during the Project. (Palmer, 2023a)	

3 Water Quality and Quantity (3.15)

Compliance with condition 3.15 of the DS is met through implementation of the *Aquatic Effects Monitoring Plan* (AEMP) (ERM, 2022b) and the memo regarding *Federal Decision Statement Condition 3.15* (Artemis Gold Inc., 2023). The AEMP addresses conditions 3.15.1 and 3.15.2, related to surface water quality/quantity monitoring in the receiving environment, this program was specifically designed to meet the following objectives:

- Detect Project related effects on the aquatic ecosystem components (including water quality);
- Confirm water quality predictions and effects assessments;
- Meet permit and regulatory requirements for effluent and receiving environment quality;
- Assess the performance of mitigation and management measures; and,
- Provide the necessary feedback and information for the adaptive management of potential Project-related effects.

While condition 3.15.3 is addressed through groundwater monitoring included in the MSDP.

Based on the progress of the project to date (Section 1.1), the program summarized in this report collected information intended to meet the objectives of the AEMP and MSDP relative to early works. A summary of the activities undertaken through these programs as they relate to condition 3.15 have been compiled in the *Follow-up Programs for Condition 3.15 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012* (Appendix 4).

This section provides an overview of monitoring, results, and adaptive management that occurred during the reporting period to support compliance with DS 3.15. Full details can be reviewed in Appendix 4. Table 3-1 below summarizes this condition of the DS and where the full details can be found in the associated appendix of this document.

Table 3-1: DS condition 3.15 follow-up monitoring

Condition No.	Condition	Appendix	Section
3.15.	The Proponent shall develop, in consultation with Indigenous groups and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish habitat in Davidson Creek, Creek 661 and Chedakuz Creek. The Proponent shall develop the follow-up program prior to construction and shall implement the follow-up program during all phases of the Designated Project. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall:	Described in the memo regarding *Federal Decision Statement Condition 3.15* (Artemis Gold Inc., 2023)	
3.15.1.	Monitor water flows in Davidson Creek during the open water season from construction until decommissioning, and temperature continuously from construction until decommissioning;	Appendix 4: Follow-up Programs for Condition 3.15 of the Blackwater Gold Project Decision Statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.0 Monitoring Flows and Temperature in Davidson Creek
3.15.2.	Monitor water quality in Davidson Creek, Creek 661 and Chedakuz Creek for contaminants of potential concern, including those identified in Table 5 of the environmental assessment report, during all phases of the Designated Project; and		3.0 Monitoring Water Quality in Davidson Creek, Creek 661, and Chedakuz Creek for Contaminants of Potential Concern
3.15.3.	Monitor, during all phases of the Designated Project, groundwater quality and quantity downstream of the tailings storage facility site D, open pit, west waste rock dump and low-grade ore stockpile to confirm that groundwater quantity and quality parameters are at or below the values identified by the Proponent in the modelled predictions in Section 5 of Blackwater Gold Project: Additional Water Quality Model Sensitivity Scenario (July 20, 2017) and Section 3 of Blackwater Gold Project: Water Treatment Responses for Comments 1266, 1270, 1271, 1272, and 1273 (February 15, 2017) for nitrite and contaminants of potential concern, and to verify the effectiveness of water management measures.		4.0 Monitoring Groundwater Quality and Quantity

3.1 Monitoring and Analysis

As outlined in Table 3-1 above, detailed regarding the reporting period monitoring activities done in support of condition 3.15 are provided in Appendix 4. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 3-2 below summarizes the monitoring, results, and recommendations for work done in those areas required by condition 3.15, it also specifies where further information on each item can be found in the Appendices.

Table 3-2: Summary of DS condition 3.15 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results
Davidson Creek watershed flow	**Appendix 4 Section 2.0** Streamflow monitoring stations at four locations: - Upper Davidson Creek: H10, H2, DC-005 - Middle Davidson Creek: DC-15 Additional spot discharge measurements at DC-10. (ERM, 2023a)	**Appendix 4 Section 2.0** Open water period between October 2022– March 2023 (ERM, 2023a)	**Appendix 4, Section 2.0** Data collected in 2022 was incorporated into the existing baseline dataset and interpolated accordingly. Data collected January – March 2023 will be interpreted in the 2023 Hydrology and Water Temperature report when one year of data is available. The typical annual hydrograph also observed in 2022 for the site has an unimodal shape, with the peak occurring in May or June. One year on record, 2016, shows a bimodal shape with an initial peak in the spring due to snowmelt followed by a pronounced second peak in the summer due to unusually wet conditions. The hydrographs for 2019 and 2020 appear to have three high flow periods, with a primary peak during the spring freshet period followed by unusually high flow periods in July and again in the fall (ERM, 2023a)

Davidson Creek Watershed Temperature	**Appendix 4 Section 2.0**
	Temperature monitoring stations at 15 locations (ERM, 2023a):
	- Upper Davidson Creek
	  - H10
	  - ST-10
	  - H2
	  - DC-05
	  - ST-18
	- Middle Davidson Creek
	  - ST-17
	  - DC-15
	- Lower Davidson Creek
	  - ST-16 KO
	  - ST-16 DEEP
	  - ST-15 KO
	  - ST-15 DEEP
	  - ST-14 KO
	  - ST-14 DEEP
	  - ST-08 KO
	  - ST-08 DEEP
		Appendix 4 Section 2.0
		Continuous (15-min intervals) (ERM, 2023a)
			Appendix 4 Section 2.0
			Data collected in 2022 was incorporated into the existing baseline dataset and interpolated accordingly. Data collected January – March 2023 will be interpreted in the 2023 Hydrology and Water Temperature report when one year of data is available.
			
			The temperature records for all stations are typically characterised by near freezing temperatures prior to the spring freshet followed by a gradual warming period until July and August, which are the warmest months. Temperatures then decrease steadily back to near freezing temperatures by November or December. (ERM, 2023a).

Water quality in Davidson Creek Watershed	**Appendix 4 Section 3.2**
	Monitored at DC-05[M,5], DC-10[M], DC-15 [M], and DC-20 [M, 5] (ERM, 2023d)
	
	Appendix 4 Section 3.3.1.2
	Before-After-Control-Impact (BACI) Statistical Analysis on DC-05, DC-10, DC-15, and DC-20 (ERM, 2023d)
	
	Appendix 4 Section 3.3.2
	Comparison to Environmental Assessment on DC-05, DC-10, DC-15, and DC-20 (ERM, 2023d)
		Appendix 4 Section 3.2
		October 1 – March 31, 2022 (Monthly[M], 5-in-30[5]) (ERM, 2023d)
			Appendix 4, Section 3.3.1.1
			Data was collected for (ERM, 2023d):
			- Physical parameters
			  - Observed relatively low mean monthly pH value (within BC guideline range)
			  - Reduction in TDS values during freshet was more pronounced and can be attributed to the dilution of surface waters as a result of snowmelt and rainfall runoff inputs to the streams.
			- Suspended material was generally low in Project streamsMajor anions
			  - Monthly mean concentration of chloride, fluoride, and sulphate were low and did not exceed BC quality guidelines.
			- Nutrients and Organic Carbon
			  - All nitrogen species were below applicable water quality guidelines.

Monitoring	Survey/Methodology	Timing	Results
			o Phosphorous was generally oligotrophic to mesotrophic. o Organic carbon concentrations were seasonally variable; the highest concentrations of total organic carbon (TOC) and DOC were typically observed during freshet months (May and June). - Cyanides o Monthly mean total cyanide concentrations were less than detection limits. - Total and Dissolved Metals o Total and dissolved metals guideline exceedances were not observed. o In January 2023 the total aluminum and total iron WQG-AL was exceeded at DC-20. The dissolved aluminum SBEB was not exceeded at any of the Davidson Creek sites (DC-05, DC-10, DC-15, and DC-20). **Appendix 4 Section 3.3.1.2** BACI review showed some increases for fluoride, and total manganese concentrations. However, interpretation of these results relative to data at other sites, and the absence of exposure of ore or waste rock and the absence of any project-related effluent discharge indicate that these are unlikely to be Project related. An increase in orthophosphate relative the baseline was also observed. However, a similar change was not noted for total phosphorus, so the increase is likely related to annual variability. There was an increase in total uranium concentrations at Davidson Creek impact sites during early construction works (October 2022 to March 2023) when compared to the baseline period that was not observed at the regional control sites. Based on the graphical analysis the elevated total uranium concentrations at the Davidson Creek sites were restricted to the early works construction period at both near-field and mid-field sites when compared to the monthly concentrations observed during baseline years. Thus, the increase in total uranium concentrations may be concluded as a Project-related effect based on statistical significance and graphical analysis. However, the following observations suggest that the increasing uranium may not be as a result of early works construction activities: • There was no effluent discharge to surface waters during the early works construction period and there was limited clearing activities completed during the early works construction period with the majority of clearing activities initiated in March 2023. • Although not statistically significant, elevated total uranium concentrations during the early works construction activities (October 2022 to March 2023) in comparison to baseline years were also observed at far-field sites in Creek 661 and Chedakuz Creek and not at near-field sites (Figure B-33).

Monitoring	Survey/Methodology	Timing	Results
			The 2022 dissolved and total uranium concentrations in groundwater were not elevated in comparison to baseline years (KP in prep) suggesting that observed increases are not likely to be a result of groundwater (with elevated uranium concentrations) that has discharged into Davidson Creek surface waters. The observed concentrations are less than the total uranium BC WQG-AL thus no effects on aquatic life are expected as a result of the elevated concentrations. The continued monitoring of total uranium in surface water and groundwater during the early works construction period is expected to provide a better understanding of the trends in total uranium concentrations in surface waters downstream of the Project. (ERM, 2023d) **Appendix 4 Section 3.3.2** The mean monthly concentrations during the early works construction period were greater than the model prediction for the same month for several water quality parameters at Davidson Creek. This is likely a result of comparing the average monthly concentration for one year and is not indicative of a Project-related effect. Elevated concentrations of the water quality parameters also tended to be elevated at the upstream control site and regional control sites. (ERM, 2023d)

Water quality in Creek 661 Watershed	**Appendix 4 Section 3.2**
	Monitored at 661-01[M, 5] (upstream control), 661-03[M], 661-04[M], 661-05[M], 661-10[M, 5], 661-20[Q] (ERM, 2023d)
	
	Appendix 4 Section 3.3.1.2
	Before-After-Control-Impact Statistical Analysis on 661-05, 661-10, 661-20 (ERM, 2023d)
	
	Appendix 4 Section 3.3.2
	Comparison to Environmental Assessment on 661-05, 661-10, 661-20 (ERM, 2023d)
		Appendix 4 Section 3.2
		October 1 –March 31, 2022 (Monthly[M], 5-in-30[5], Quarterly[Q]) (ERM, 2023d)
			Appendix 4, Section 3.3.1.1
			Data was collected for (ERM, 2023d):
			- Physical parameters
			  o Observed relatively low mean monthly pH value (within BC guideline range)
			  o Suspended material was generally low in Project streams
			- Major anions
			  o Monthly mean concentrations of chloride, fluoride, and sulphate were low and did not exceed BC quality guidelines.
			- Nutrients and Organic Carbon
			  o All nitrogen species were below applicable water quality guidelines.
			  o Phosphorous was generally oligotrophic to mesotrophic.
			  o Organic carbon concentrations were seasonally variable; the highest concentrations of total organic carbon (TOC) and DOC were typically observed during freshet months (May and June).
			- Cyanides
			  o Monthly mean total cyanide concentrations were less than detection limits.
			- Total and Dissolved Metals
			  o Similar to baseline years (2016 to September 2022), the guideline exceedances for total and dissolved metals during the early works construction period was observed in the Creek 661 watershed. Guideline exceedance was observed for total aluminum at site 661-01 in January 2023 and dissolved aluminum at site 661-01 in December 2022 and in January, February, and March of 2023.

Monitoring	Survey/Methodology	Timing	Results
			Appendix 4 Section 3.3.1.2 BACI review showed an increase in orthophosphate relative the baseline. However, a similar change was not observed for total phosphorus, so the increase is likely related to annual variability. (ERM, 2023d) **Appendix 4 Section 3.3.2** The mean monthly concentrations during the early works construction period were greater than the model prediction for the same month for several water quality parameters at Creek 661. This is likely a result of comparing the average monthly concentration for one year and is not indicative of a Project-related effect. Elevated concentrations of the water quality parameters also tended to be elevated at the upstream control site and regional control sites. (ERM, 2023d)

Water quality in Chedakuz Watershed	**Appendix 4 Section 3.2**
	Monitored at CC-03 [M, 5], CC-05 [Q], CC-10 [Q], CC-15 [M, 5], CC-20 [M, 5], CC-30 [Q, 5], CC-40 [M, 5] (ERM, 2023d)
		Appendix 4 Section 3.2
		October 1 – December 31, 2022 (Monthly[M], 5-in-30[5], Quarterly[Q]) (ERM, 2023d)
			Appendix 4, Section 3.3.1.1
			Data was collected for (ERM, 2023d):
			- Physical parameters
			  o Observed relatively low mean monthly pH value (within BC guideline range)
			  o Moderate hardness was observed for some months.
			  o Suspended material was generally low in Project streams, peaks were observed at downstream sites in October and November
			- Major anions
			  o Monthly mean concentrations of chloride, fluoride, and sulphate were low and did not exceed BC quality guidelines.
			- Nutrients and Organic Carbon
			  o All nitrogen species were below applicable water quality guidelines.
			  o Phosphorus was relatively high at CC-10, mean values in fall were above trigger values for eutrophic conditions.
			  o Organic carbon concentrations were seasonally variable; the highest concentrations of total organic carbon (TOC) and DOC were typically observed during freshet months (May and June).
			- Cyanides
			  o Monthly mean total cyanide concentrations were generally less than detection limits. Detectable concentrations of total cyanide were observed at CC-05 in October 2022 (a single sample of the 5-in-30 was 0.0118 mg/L) and at CC-15 in January 2023.
			  o Cyanide is not yet being used on site to process ore as the site is still in construction.
			- Total and Dissolved Metals
			  o Guideline exceedances were observed for total aluminum and total iron.
			  o The October 2022 to March 2023 mean monthly metal concentration and seasonal trends at Chedakuz Creek sites were generally similar to those observed during the 2016 to September 2022 baseline period. Exceptions to this were total and dissolved aluminum, total beryllium, total molybdenum, and total uranium.

Monitoring	Survey/Methodology	Timing	Results
			Appendix 4 Section 3.3.1.2 An assessment of effects was not completed at the Creek 661 sites downstream of the Camp (661-03, 661-04) because sites were sampled for the first time in July 2022.(ERM, 2023d)

4 Fish Habitat (3.16)

The fish and fish habitat *Follow-up Programs for Condition 3.16 of the Blackwater Mine Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012* (Palmer, 2023c) was developed to address the conditions outlined in condition 3.16 of the DS. It was designed to first characterize baseline conditions for each of the indicators listed in the condition, and then monitor those indicators during all phases of the Project to:

a) Conduct, prior to the commissioning of the freshwater supply system (FWSS) as the main mitigation measure for loss of water in Davidson Creek, fish habitat and quality surveys in the Tatelkuz Lake littoral zone

b) Monitor Tatelkuz Lake littoral zone for the commissioning of the freshwater supply system until decommissioning.

c) Monitor water flows in lower Chedakuz Creek between Tatelkuz Lake and the confluence with Davidson Creek during the open water season from Construction until Decommissioning.

Based on the progress of the project to date (Section 1.1), the reporting period field programs collected information intended to represent a pre-construction updated baseline for fish and fish habitat to inform long-term monitoring under this condition. The programs and their results are presented in the *FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report* (Appendix 2).

This section provides an overview of monitoring, results, and adaptive management that occurred during the reporting period to support compliance with DS 3.16. Full details can be reviewed in the documents listed above. Table 4-1 below summarizes this condition of the DS and where the full details can be found in the associated appendix of this document.

Table 4-1: DS condition 3.16 follow-up monitoring

Condition No.	Condition	Appendix	Section
3.16.	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to fish habitat in Tatelkuz Lake and Chedakuz Creek. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall:	Described in the *Follow-up Programs for Condition 3.16 of the Blackwater Mine Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012* (Palmer, 2023b)	
3.16.1	Conduct, prior to the commissioning of the freshwater supply system, fish habitat quantity and quality surveys in the Tatelkuz Lake littoral zone;	Appendix 2: FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report	2.3 Tatelkuz Lake
3.16.2	Monitor the Tatelkuz Lake littoral zone from the commissioning of the freshwater supply system until decommissioning; and		1.2.1.2 Condition 3.16 Follow-up Program
3.16.3	Monitor water flows in Chedakuz Creek between Tatelkuz Lake and the confluence with Davidson Creek during the open water season from construction until decommissioning.		2.2 Lower Chedakuz Creek

4.1 Monitoring and Analysis

As outlined in Table 4-1 above, detailed regarding the reporting period monitoring activities done in support of condition 3.16 are provided in Appendix 2. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 4-2 below summarizes the monitoring results and recommendations for work done in Davidson Creek, it also specifies where further information on each item can be found in the Appendices.

The results of these field programs provide a basis for long-term monitoring to determine changes in fish abundance and habitat during the Project.

No adaptive management was required. Monitoring will continue as described in the *Follow-up Programs for Condition 3.16 of the Blackwater Gold Project* (Palmer, 2023c), with a few changes in the approach to monitoring. These changes are summarized in Table 4-2.

Table 4-2: Summary of DS condition 3.16 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results	Adaptive Management/Recommendations
Chedakuz Creek – Fish Habitat	**Appendix 2, Section 2.2.1.1.1** Fish Habitat (Palmer, 2023a)	August 28, 2022, (Palmer, 2023a)	**Appendix 2, Section 2.2.1.2.1** An overview of the RISC (2001) Site Card data for sites CC_MT2, CC_MT3, and CC_MT6 on lower Chedakuz Creek was collected (Palmer, 2023a).	
	Appendix 2, Section 2.2.1.1.2 Water quality (Palmer, 2023a)	August 28, 2022 (Palmer, 2023a)	**Appendix 2, Section 2.2.1.2.2** Water Quality was collected at CC_MT2, CC_MT3, and CC_MT6. Data collected ranged between (Palmer, 2023a): - Temperature: 16.8 – 17.2ºC - pH: 8.17 – 8.19 - Specific Conductivity: 111.8 – 112.3 µS/cm - Dissolved Oxygen: 8.80 – 9.31 mg/L	
	Appendix 2, Section 2.2.1.1.3 Unmanned vehicle mapping (Palmer, 2023a)	July 2022 (Palmer, 2023a)	**Appendix 2, Section 2.2.1.2.3** Survey imagery from the UAV mapping was successfully compiled. (Palmer, 2023a)	
Chedakuz Creek - Fish community and abundance	**Appendix 2, Section 2.2.2.1** Minnow trap survey (Palmer, 2023a) Electrofishing (Palmer, 2023a)	September 15, 2022 (Palmer, 2023a)	**Appendix 2, Section 2.2.2.2** A total of 130 fish were captured in the lower Chedakuz Creek minnow trap survey, including: 76 sucker species, 20 Northern Pike Minnow, 8 Prickly Sculpin (*Cottus asper*), 1 Rainbow Trout, and 25 unidentified fish (Table 2.2-4). No mortalities were observed. A total of 91 fish were captured during the lower Chedakuz Creek electrofishing, including: 21 sculpin (*Cottus spp.*), 28 sucker species, 20 Northern Pike Minnow, 4 Rainbow Trout, 1 Mountain Whitefish, and 17 kokanee (Table 2.2-4). Two mortalities (one Prickly Sculpin and one kokanee) were observed. Fork lengths of those capture Rainbow Trout and Kokanee salmon corresponded with an age bracket of approximately 2 years (~180 mm). (Palmer, 2023a)	**Appendix 2, Section 2.2.2.2** Due to the small sample size, inferences relating to the age distribution of the Rainbow Trout population in Chedakuz Creek cannot be made. Additional fish sampling efforts are planned for the 2023 field program to collect more data.
Chedakuz Creek – Kokanee Spawner Survey	**Appendix 2, Section 2.2.3.1**	August 26, 2022, September 11, 2022, September 18, 2022 (Palmer, 2023a)	**Appendix 2, Section 2.2.3.2** Three visual spawner surveys found: - A total of 140 kokanee were observed on August 26, 2022. - A total of six kokanee were observed on September 11, 2022. - A total of 52 kokanee were observed on September 18, 2022. The majority of fish observed were holding or actively migrating upstream. No redds were observed in any of the surveyed areas, but the presence of kokanee indicate some spawning is occurring in lower Chedakuz Creek. (Palmer, 2023a)	
Chedakuz Creek – Overwintering Fish Habitat	**Appendix 2, Section 2.2.4.1**	March 8, 2023 (Palmer, 2023a)	**Appendix 2, Section 2.2.4.2** The overwintering sites ranged in depth from 0.25 m to undetermined, due to deep water conditions not allowing for a safe full measurement. Each of the three sites had open water with no ice or snow cover. Mean water temperatures ranged from 1.24 °C to 1.54 °C. Mean dissolved oxygen levels were generally low, ranging from 3.92 mg/L to 4.07 mg/L. These values are below the BCWQG for Aquatic Life (Long-term Chronic WQG for all life stages other than buried embryo/alevin: 8 mg/L for long-term chronic, 5 mg/L for instantaneous minimum; MECCS 2021). Mean pH values were circumneutral, ranging from 7.64 to 7.71. Conductivity and specific conductivity ranged from 87 µS/cm to 90 µS/cm and 159 µS/cm to 162 µS/cm, respectively. (Palmer, 2023a)	

Tatelkuz Lake – Fish Habitat and water quality assessments	**Appendix 2, Section 2.3.1** Limnology and ice conditions (Palmer, 2023a)	March 3 – 4, 2022 (Ice thickness) June, August, October 2022 (Surface water samples) (Palmer, 2023a)	**Appendix 2, Section 2.3.1.2** Thickness measured in Tatelkuz Lake at TLLit2 ranged from 0.32 m to 0.44 m. Tatelkuz Lake was thermally stratified at TLLim3 in June, August, and October in 2022 Dissolved oxygen levels at TLLim3 ranged from 7.44 to 12.52 mg/L in June, from 2.50 to 8.13 mg/L in August, and from 2.86 to 9.04 mg/L in October. Total phosphorus in surface water at TLLim3 was the lowest in August 2022 and highest in June 2022, while total nitrogen was lowest in October 2022 and highest in June 2022. Total phosphorus analytical results from the August and October 2022 samples fell within the BC WQG FAL (BC ENV 2021) guideline range for total phosphorus of 0.005 to 0.015 mg/L, however the June 2022 sample exceeded the upper limit by 0.8 mg/L. (Palmer, 2023a)	
	Appendix 2, Section 2.3.2.1 Littoral habitat assessment (Palmer, 2023a)	August 24-29, 2022 (In-situ water quality measurements) (Palmer, 2023a) October 2022 (UAV mapping) (Palmer, 2023a)	**Appendix 2, Section 2.3.2.2.1** Each site's littoral habitat characteristics were defined by depth range. Water quality variables were measured at the 11 littoral transect sites at a depth of 0.5 and 1 m. At 0.5 m, temperature across the lake ranged from 17.9 to 26.1ºC, pH ranged from 7.91 to 8.8, conductivity ranged from 113.6 to 133.6 µS/cm, specific conductivity ranged from 131.5 to 134.2 µS/cm, and dissolved oxygen ranged from 6.66 to 11.4 mg/L. At 1 m, temperature across the lake ranged from 17.7 to 24.7ºC, pH ranged from 7.89 to 8.79, conductivity ranged from 113.5 to 133.6 µS/cm, specific conductivity ranged from 130.9 to 134.4 µS/cm, and dissolved oxygen ranged from 7.33 to 12.59 mg/L. UAV mapping was completed for the Tatelkuz Lake littoral zone at the 11 fish habitat transects. (Palmer, 2023a)	
Tatelkuz Lake - Fish community and abundance	**Appendix 2, Section 2.3.3.1.1** Littoral fish community and abundance beach seines targeting larval life-stage Brassy Minnow (*Hyboganthus hankinsoni*) (Palmer, 2023a)	June 22 and 27, 2022 (Palmer, 2023a) July 31 and August 29, 2022, (Palmer, 2023a)	**Appendix 2, Section 2.3.3.1.2** An initial beach seining effort to assess presence of larval Brassy Minnow was conducted between June 22 and 27, 2022 at 10 of the 11 littoral fish inventory sites (TLLit2 was not sampled due to safety concerns regarding accessing steep banks). No larval Brassy Minnow were captured, and Palmer biologists determined that it was likely too early in the spawning season. Subsequent beach seining efforts, conducted on July 31 and August 29, 2022, resulted in fish captures at five of the 11 sites, including larval-stage fish. CPUA and fish density were highest at TLLit1 at 2.50 fish per m2 and 250 fish per 100 m2, respectively. Larval and juvenile Brassy Minnow represented 32.8% of the captured fish, sculpin species represented 56.5% of the captured fish, and other minnow species represented 10.8% of the captured fish in Tatelkuz Lake. (Palmer, 2023a)	**Appendix 2, Section 3.0** A recommendation for future field programs is to shift the timing of larval sampling until late July/early August to allow enough time for fish to spawn and larval fish to develop to a size suitable for identification. (Palmer, 2023a)
	Appendix 2, Section 2.3.3.2.1 Littoral fish community and abundance beach seines targeting adult life-stage Brassy Minnow (Palmer, 2023a)	August 24 - 29, 2022 (Palmer, 2023a)	**Appendix 2, Section 2.3.3.2.2** A total of 692 fish were captured during the Tatelkuz lake adult Brassy Minnow survey. Of the captured fish, 5.2% were identified as Brassy Minnow, 0.3% were identified as Mountain Whitefish, 6.1% were identified as Northern Pikeminnow (representing 6.1% of total captured), 16.9% were identified as Prickly Sculpin, 0.9% were identified as Rainbow Trout, 0.3% were identified as Longnose Sucker, 1.6% were identified as Largescale Sucker (*Catostomus macrocheilus*), 1.3% were identified as sculpin species, and 67.5% were identified as sucker species. (Palmer, 2023a)	

5 Migratory Birds (4.5)

The purpose of the *Wildlife Mitigation and Monitoring Plan* (WMMP) (ERM, 2022i) is to manage impacts on wildlife in the Blackwater Project area during Construction, Operations, Closure, and Post-closure.

The *2022 Wildlife Mitigation and Monitoring Program Compliance Report* (ERM, 2023b) (Appendix 5) summarizes and presents the results of the follow up programs and monitoring of mitigation measures during 2022. Pre-clearing surveys occurred in March 2023 (Appendix 13). This follow-up program includes monitoring for migratory bird species required by condition 4.5 of the DS is sections 3.6 (raptors), 3.7 (waterbirds), and 3.8 (upland birds):

> **4.5** The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The follow-up program shall include the mitigation measures used to comply with condition 4.1 to 4.4. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.

5.1 Monitoring and Analysis

As outlined above, details regarding the monitoring activities done in support of condition 4.5 are provided in Appendix 5 and Appendix 13. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results, and recommendations. Table 5-1 below summarizes the monitoring results and recommendations and identifies where further information on each item can be found in the Appendices.

Clearing was not completed at the Project during the bird sensitive period in 2022 and as a result no preclearing surveys or subsequent nest success surveys were completed (ERM, 2023b).

No adaptive management actions were required, and future monitoring will occur as described in the *Wildlife Mitigation and Monitoring Plan* (ERM, 2022i). This will include formal analysis during the operations phase of the Project, once data have been recorded for a sufficient number of years to conduct statistical modelling.

Table 5-1: Summary of DS condition 4.5 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results
Pre-clearing Surveys	**Appendix 5, Section 2.1.2** Pre-clearing surveys for birds (ERM, 2023b) **Appendix 13** Pre-clearing Surveys	September 13 – 14 2022 (ERM, 2023b) September 14 – 15 2022 (ERM, 2023b) March 2023	**Appendix 5, Section 2.1.3** Surveys did not identify any active or historical wildlife features or highly suitable habitat, with limited signs of wildlife use were identified (ERM, 2023b) **Appendix 13, *Wildlife Pre-clearing Surveys – BWG March 27 through 31, 2023*** Pre-clearing surveys were complete in March 2023 ahead of clearing activities. A white-wing crossbill nest was identified in Sequence 3. A 50 m buffer was established.
Raptors	**Appendix 5, Section 2.2.2** Habitat loss (ERM, 2023b)	September – December 2022 (ERM, 2023b)	**Appendix 5, Section 2.2.3** Clearing completed in 2022 was limited to the Plant Site area, which accounted for 26.4 ha of disturbance. There is no overlap between the 2022 clearing limits and fisher, short eared owl, yellow rail, or Wilson's snipe highly suitable habitat. The highest proportion of habitat loss was for moose growing season, wolverine growing season, and forest bird interior forest habitat. (ERM, 2023b)
	Appendix 5, Section 2.3.3 Bird mortality (ERM, 2023b)	2022 (ERM, 2023b)	**Appendix 5, Section 2.3.4** No interactions, incidents, mortalities, or vehicle collisions were recorded during 2022. (ERM, 2023b)
	Appendix 5, Section 2.5.2.1 Transmission line monitoring (ERM, 2023b)	July 10, 2022 (ERM, 2023b) September 10 and 11, 2022 (ERM, 2023b)	**Appendix 5, Section 2.5.3** The initial mortality surveys completed during the establishment of the permanent transects did not detect any signs of bird mortality. (ERM, 2023b)
	Appendix 5, Section 2.5.2.2 Electromagnetic field monitoring (ERM, 2023b)	N/A	**Appendix 5, Section 2.5.2.2** The literature review and follow-up recommendations for electromagnetic fields has not yet begun, but will commence during the construction phase, likely 2024 or 2025. (ERM, 2023b)
	Appendix 5, Section 3.6.2.1 Aerial stick nest survey (ERM, 2023b)	May 21, 2022 (ERM, 2023b)	**Appendix 5, Section 3.6.3.1** Surveys did not identify any new stick nests within the Local Study Area (LSA). One stick nest was identified during pre-construction surveys in December 2021. The nest was revisited during the May 2022 survey and was unoccupied. (ERM, 2023b)
	Appendix 5, Section 2.3.3.1 Incidental observations (ERM, 2023b)	N/A (ERM, 2023b)	**Appendix 5, Section 3.6.3.2** In total, 57 individuals and three stick nests were incidentally recorded. All three stick nests were determined to be occupied by osprey. The most frequently observed species was bald eagle, accounting for 42% of all raptor observations. Osprey were the second most frequently observed species, accounting for 25% of raptor observations. (ERM, 2023b)
Waterbirds	**Appendix 5, Section 2.2.2** Habitat loss (ERM, 2023b)	September – December 2022 (ERM, 2023b)	**Appendix 5, Section 2.2.3** Clearing completed in 2022 was limited to the Plant Site area, which accounted for 26.4 ha of disturbance. There is no overlap between the 2022 clearing limits and fisher, short eared owl, yellow rail, or Wilson's snipe highly suitable habitat. The highest proportion of habitat loss was for moose growing season, wolverine growing season, and forest bird interior forest habitat. (ERM, 2023b)
	Appendix 5, Section 2.3.3 Bird mortality (ERM, 2023b)	2022 (ERM, 2023b)	**Appendix 5, Section 2.3.4** No interactions, incidents, mortalities, or vehicle collisions were recorded during 2022. (ERM, 2023b)
	Appendix 5, Section 2.4 Facility waterbody monitoring (ERM, 2023b)	N/A (ERM, 2023b)	**Appendix 5, Section 2.4** Currently there are no facility waterbodies present at the Project. As a result, monitoring was not completed in 2022 and will commence once facility waterbodies are established at the site. (ERM, 2023b)
	Appendix 5, Section 2.5.2.1 Transmission line monitoring (ERM, 2023b)	July 10, 2022, (ERM, 2023b) September 10 and 11, 2022 (ERM, 2023b)	**Appendix 5, Section 2.5.3** The initial mortality surveys completed during the establishment of the permanent transects did not detect any signs of bird mortality. (ERM, 2023b)

Monitoring	Survey/Methodology	Timing	Results
		May 18 – 20, 2022 (Spring pair) (ERM, 2023b) July 8 – 12, 2022 (Summer brood) (ERM, 2023b) September 9 – 11, 2022 (Fall migration) (ERM, 2023b)	**Appendix 5, Section 3.7.3.1** Surveys identified a total of 35 species and 2,564 individuals from eight waterbird groups: dabbling ducks (n = 7), diving ducks (n = 9), geese and swans (n = 2), gulls and terns (n =3), loons and grebes (n = 4), riverine birds (n = 1), and shorebirds (n = 6), and other birds (n = 3). Ten groups of unspecified species were also recorded during surveys. Two species of conservation concern, killdeer (n = 1) and lesser yellowlegs (n = 8), were identified during the spring surveys. Three species of conservation, western grebe (n = 7), lesser yellowlegs (n = 1), and American white pelican (n = 7), were identified during the summer surveys. Three species of conservation concern, great blue heron (n = 2), western grebe (n = 7), and red-necked phalarope (n = 1), were identified during the fall surveys. The most commonly observed species were mallard (n = 483), bufflehead (n = 329), ring-necked duck (n = 234), and lesser scaup (n = 217). Waterbird groups were detected in varied habitat types including pond, lake, wetland, river, creek, swamp/bog, and other (gravel pit and ditch). Waterbirds were detected primarily in lakes (59%) and pond (32%) habitats (ERM, 2023b)
	Appendix 5, Section 2.3.3.1 Incidental observations (ERM, 2023b)	N/A (ERM, 2023b)	**Appendix 5, Section 3.7.3.2** An additional 36 individual waterbirds from six species were incidentally observed during 2022 surveys (ERM, 2023b)
	Appendix 5, Section 2.2.2 Habitat loss (ERM, 2023b)	September – December 2022 (ERM, 2023b)	**Appendix 5, Section 2.2.3** Clearing completed in 2022 was limited to the Plant Site area, which accounted for 26.4 ha of disturbance. There is no overlap between the 2022 clearing limits and fisher, short eared owl, yellow rail, or Wilson's snipe highly suitable habitat. The highest proportion of habitat loss was for moose growing season, wolverine growing season, and forest bird interior forest habitat.
	Appendix 5, Section 2.3.3 Bird mortality (ERM, 2023b)	2022 (ERM, 2023b)	**Appendix 5, Section 2.3.4** No interactions, incidents, mortalities, or vehicle collisions were recorded during 2022. (ERM, 2023b)
	Appendix 5, Section 2.5.2.1 Transmission line monitoring (ERM, 2023b)	July 10, 2022, (ERM, 2023b) September 10 and 11, 2022 (ERM, 2023b)	**Appendix 5, Section 2.5.3** The initial mortality surveys completed during the establishment of the permanent transects did not detect any signs of bird mortality. (ERM, 2023b)
Upland Birds	**Appendix 5, Section 3.8.2.1** Forest and grassland bird population monitoring (ERM, 2023b)	June 2022 (ERM, 2023b)	**Appendix 5, Section 3.8.3.1** During point count surveys, a total of 165 individual upland birds were recorded across 34 species. The most commonly observed species were; yellow-rumped warbler (n=38), dark-eyed junco (n=18), Canada Jay (n=17,), and varied thrush (n=14). Olive-sided flycatcher (n=3) and barn swallow (n=2) were the only upland bird species at risk recorded. Given that 2022 was the first year of the compliance monitoring program, detailed analysis cannot be completed yet, but will be conducted in future years as per the WMMP. (ERM, 2023b)
	Appendix 5, Section 3.8.2.2 Common nighthawk monitoring (ERM, 2023b)	N/A	**Appendix 5, Section 3.8.2.2** Common nighthawk monitoring was not completed in 2022 and is scheduled to commence in 2023. (ERM, 2023b)
	Appendix 5, Section 3.8.2.4 Clark's nutcracker monitoring (ERM, 2023b)	July – November 2022 (Camera and Autonomous Recording Unit (ARU) deployment) (ERM, 2023b) August 29 – 30, 2022 (Call playback) (ERM, 2023b)	**Appendix 5, Section 3.8.3.3** Clark's nutcrackers were identified in 187 ARU files across all sites with available data. All ARU sites had consistent Clark's nutcracker detections throughout deployment. None of the cameras detected Clark's nutcracker. Birds are difficult to monitor via remote camera due to their small size and fast movements. The lack of camera detections despite abundant Clark's nutcracker detections by ARU and call playback indicate that cameras are likely not a useful monitoring tool for this species. These surveys were conducted to obtain additional baseline data on the presence of Clark's nutcracker in the whitebark pine habitat on Mt Davidson. Three call playback (CPB) surveys were completed at every odd survey site along each transect. In summary, 55%

Monitoring	Survey/Methodology	Timing	Results
			of sites has responses. Transects with white bark pine on average had a higher percentage of call playbacks that elicited responses from Clark's nutcrackers. (ERM, 2023b)
	Appendix 5, Section 3.8.2.3 Swift and swallow monitoring (ERM, 2023b)	June 14 – 20, 2022 (ERM, 2023b)	**Appendix 5, Section 3.8.3.2** No habitat for bank swallow or black swift was identified in the RSA. Therefore, no specific surveys were conducted for these two species. Surveys for barn swallows were completed around the mine site infrastructure. No other suitable nesting buildings were found in the LSA. Three species of swallow were observed, including barn swallow (n = 6), tree swallow (n = 7), and violet-green swallow (n= 4). Three active barn swallow nests were identified, and two potential tree swallow or violet-green swallow nesting locations were identified, with several additional inactive nests noted. (ERM, 2023b)
	Appendix 5, Section 2.3.3.1 Incidental observations (ERM, 2023b)	N/A (ERM, 2023b)	**Appendix 5, Section 3.8.3.4** An additional 244 individual upland birds from 42 species were incidentally observed during the 2022 field season. Of the 42 species incidentally observed six were not observed during other upland field surveys in the 2022 season: pileated woodpecker, mountain bluebird, unknown ptarmigan, red breasted sap sucker, yellow warbler, and violet-green sparrow. The unknown sparrow (n=35), yellow rumped warbler (n=27), and Canada jay (n=21) were the most observed incidental species making up 34% of individuals observed. The only upland bird species of conservation concern that was incidentally observed was the olive-sided flycatcher. (ERM, 2023b)

6 Wetlands (5.5)

The *Wetland Management and Offsetting Plan* (WMOP) (ERM, 2022h) was developed to address a number of conditions, including those outlined in condition 5.5 of the DS. It was designed to monitor the aquatic receiving environment to provide the information needed to achieve the following objectives:

- Protect all wetlands until additional baseline studies can be complete;
- Avoid all potential wetland areas as mapped by Terrestrial Ecosystem Mapped (TEM) during early works and up until the necessary baseline information has been collected and reported out on;
- Provide pre-construction surveys to identify the extent and flag 30 m buffers around all TEM wetlands during early works and up until the necessary baseline information has been collected by a QP. Work with the IEM to schedule site visits when tree clearing is taking place in proximity to flagged wetland areas. Aboriginal Group Monitors on rotation at the time of the surveys will be invited to participate in surveys;
- Establish workplan objectives for baseline fieldwork to be conducted in the summer of 2022; and,
- Identify and establish a wetland offsetting program at Mathews Creek Ranch and other areas as required to meet offsetting objectives.

Based on those objectives and the progress of the Project to date (Section 1.1), the 2022 program included the collection of spatial data to complete an accurate map of all wetlands to the 1:5,000 scale within the mine site and transmission line footprints; collection of wetland health and function attributes, including wildlife habitat function, to inform baseline description of wetland type and function; and collection of wetland carbon sequestration data, specifically through an assessment of the peat layer. Field surveys were also completed to confirm wetland classification and status (red or blue-listed wetlands) within the mine site, including the proposed plant site, to support early works construction. These activities are summarized in the *Blackwater Gold Project Wetland Mapping and Assessment Baseline report* (Ecologic Consulting Ltd., 2023) (Appendix 9).

This section provides an overview of monitoring, results, and adaptive management that occurred during the reporting period support compliance with DS 5.5. Full details can be reviewed in Appendix 9. Table 6-1below summarizes this condition of the DS and where the full details can be found in the associated appendix of this document.

Table 6-1: DS condition 5.5 follow-up monitoring

Condition No.	Condition	Appendix	Section
5.5.	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the predictions of the environmental assessment as it pertains to the adverse environmental effects of the Designated Project on wetland functions and to determine the effectiveness of the mitigation measures as it pertain to wetlands. The Proponent shall implement the follow-up program during from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall:	Described in the WMOP (ERM, 2022h)	
5.5.1.	Conduct pre-construction surveys within the mine site to confirm the absence of red or blue-listed wetlands. The Proponent shall provide the results of the survey to the Agency and to Indigenous groups prior to the start of construction. If the results of the survey demonstrate the presence of red or blue-listed wetlands within the mine site, the Proponent shall develop, prior to construction, and implement additional mitigation measures;		1.2 Regulatory Requirements, Appendix B
5.5.2.	Monitor changes to wetland functions of wetlands located within the mine site and remaining after vegetation clearing required to construct project components during all phases of the Designated Project; and	Appendix 9: Blackwater Gold Project Wetland Mapping and Assessment Baseline	3.7.2 Wetland Function Assessment
5.5.3.	Monitor all compensatory wetland sites at a minimum annually, to ensure they meet or exceed performance standards for wetland functions established pursuant to condition 5.4 from the start of compensation until wetland functions are attained.		No compensation works have been actively constructed. Mathews Creek Ranch and Dykam Ranch baseline data was collected in 2022. (Ecologic Consulting Ltd., 2023)

6.1 Monitoring and Analysis

As outlined in Table 6-1 above, detailed regarding the monitoring activities done in support of condition 5.5 are provided in Appendix 9. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 6-2 below summarizes the monitoring, results, and recommendations for work done in those areas required by condition 5.5, it also specifies where further information on each item can be found in the Appendices.

No adaptive management actions were required, and future monitoring will occur as described in the WMOP (ERM, 2022h).

Table 6-2: Summary of DS condition 5.5 follow-up monitoring

Monitoring	Survey/Methodology	Dates	Results Summary
Wetland Mapping	**Appendix 9, Section 2.1** Wetland Mapping (Ecologic Consulting Ltd., 2023)	Summer 2022 (Ecologic Consulting Ltd., 2023)	**Appendix 9, Section 3.1** All five wetland classes (bog, fen, marsh, swamp and shallow open water), along with floodplains and ponds, were mapped within the Project area, encompassing a total of 983.3 hectares (ha). Of these wetlands, there were seven bog site associations (384.2 ha), ten fen site associations (122.6), two marsh site associations (18.0 ha), six swamp associations (435.3 ha), and one open water class (23.2 ha). The most abundant wetland association was the Spruce – Common horsetail – Leafy moss swamp (Ws07), followed by the Black spruce – Water sedge – Peat-moss bog (Wb05), and then the Black spruce – Soft-leaved sedge – Peat-moss (Wb08) (Ecologic Consulting Ltd., 2023). Eight of the mapped site associations are blue-listed, including (Ecologic Consulting Ltd., 2023): • Two bogs: Lodgepole pine - Few-flowered sedge - Peat-moss Bog/Poor Fen (Wb10) and Shore sedge - Buckbean - Peat-moss Bog (Wb13); • Four fens: Slender sedge – Buckbean (Wf06), Shore sedge – Buckbean – Hook-moss (Wf08), Tufted clubrush – Star moss (Wf11), and Narrow-leaved cotton-grass – Shore sedge (Wf13); and • Two swamps: MacCalla's willow – Beaked sedge (Ws05), and Spruce – Common horsetail – Leafy moss (Ws07).
Field Verification	**Appendix 9, Section 2.2.1** Wetland Health Assessment (Ecologic Consulting Ltd., 2023)	Summer 2022 (Ecologic Consulting Ltd., 2023)	**Appendix 9, Section 3.7.1** Wetland Health assessments were completed at 96 full plots. Of these, 77% (74/96) were properly functioning, 8% (8/96) were functioning at risk, 8% (8/96) were functioning at high risk, and 6% (6/96) were not properly functioning. Wetlands that were not properly functioning were primarily bogs and swamps, with partial to 100% impact from logging. Four out of six of these sites represented blue-listed wetlands, Wb08 (Plot Identification: WT-22-190, WT-22-191) and WS07 (WT-22- 101, WT-22-311). (Ecologic Consulting Ltd., 2023)
	Appendix 9, Section 2.2.2 Wetland Function Assessment (Ecologic Consulting Ltd., 2023)	Summer 2022 (Ecologic Consulting Ltd., 2023)	**Appendix 9, Section 3.7.2, Appendices C - I** The four primary wetland functions (hydrological, biochemical, habitat and ecosystem) were assessed through identified data components based on data collected. Data collected in 2022 establishes baseline conditions for the 96 wetlands assessed. (Ecologic Consulting Ltd., 2023)
	Appendix 9, Section 2.2.3 Wildlife Habitat Assessment (Ecologic Consulting Ltd., 2023)	Summer 2022 (Ecologic Consulting Ltd., 2023)	**Appendix 9, Section 3.7.3** Wildlife health assessments were completed at 70 full plots. These assessments sought habitat for caribou, grizzly bear, little brown myotis, moose, muskrat, olive-sided flycatcher, ring-necked duck, and western toad. Suitable habitat was identified for most species, excluding muskrat. Bogs and swamps represented the most suitable habitat, providing food, thermal cover, and security cover. (Ecologic Consulting Ltd., 2023)
Carbon Analysis	**Appendix 9, Section 2.3** Carbon Analysis (Ecologic Consulting Ltd., 2023)	Summer 2022 (Ecologic Consulting Ltd., 2023)	**Appendix 9, Section 3.8** Wetlands with potential to store carbon were assessed during the field work. These were bogs and fen wetland classes. Eight were sampled for carbon characteristics. Both fens and bogs were identified to have significant peat stores, however, there were not enough samples to generate distinctions between these two wetland types with respect to carbon stores. (Ecologic Consulting Ltd., 2023)

7 Country Foods (6.11) (6.13)

The *Country Foods Monitoring Plan* (CFMP) (Entia Environmental Consultants Ltd., 2022) was developed to address a number of conditions, including those outlined in condition 6.11 of the DS. It was designed to identify and mitigate potential adverse effects on the health of Indigenous Peoples and other land users as a result of the Project.

The *2022 Country Foods Monitoring Plan Annual Report* (Entia Environmental Consultants Ltd., 2023)(Appendix 7) has been developed to summarize activities under the CFMP. Based on the progress of the project to date (Section 1.1), the program collected information intended to meet objectives relevant to early works. No additional monitoring occurred between January 1 and March 31, 2023, as monitoring specific to the CFMP requires snow free conditions and is scheduled for the summer months.

Supplementary to the CFMP is the *Country Foods and Scio-economic Conditions Follow-Up Program* (ERM, 2022d), which was developed to address condition 6.13 of the DS. This program is intended to monitor and adaptively manage potential adverse effects on the socio-economic conditions of Indigenous groups as a result of changes to access, availability, and quality of country foods due to the Project components and activities. The *2022 Country Foods and Socio-economic Conditions Follow-up Program: Current Conditions Report* (ERM, 2023c) (Appendix 8*)* has been developed to understand baseline conditions and provide context for identifying change following future monitoring.

This section provides an overview of monitoring, results, and adaptive management that occurred during the reporting period to support compliance with DS 6.11 and 6.13. Further details can be reviewed in Appendix 7. Table 7-1 below summarizes this condition of the DS and where the full details can be found in the associated appendix of this document.

Table 7-1: DS condition 6.11 follow-up monitoring

Condition No.	Condition	Appendix	Section
6.11.	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples caused by changes in concentrations of contaminants of potential concern in water, soil, vegetation and wildlife, including fish, and determine the effectiveness of mitigation measures. As part of the development of the follow-up program, the Proponent shall identify the vegetation and wildlife species that shall be monitored, the locations where the monitoring will be conducted, the contaminants to be monitored and the frequency of the monitoring. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. In doing so, the Proponent shall:	*Country Foods Monitoring Plan* (Entia Environmental Consultants Ltd., 2022)	
6.11.1	Monitor, prior to construction, contaminants of potential concern in soil, vegetation, wildlife, including fish and water. The Proponent shall also co-locate soil sampling with vegetation samples and water sampling with fish samples;	Appendix 7: 2022 Country Foods Monitoring Plan Annual Report	1.2 Project Activities Completed in 2022
6.11.2	Monitor, during all phases of the Designated Project, contaminants of potential concern in water, soil, vegetation, and wildlife species;		3. Sampling under the CFMP in 2022
6.11.3	If the sampling and monitoring results referred to in condition 6.11.1 and 6.11.2 exceed the predictions made during the environmental assessment, implement any modified or additional mitigation measures pursuant to condition 2.9 based on the results of the follow-up program and update the human health risk assessment identified by the Proponent in Appendix 9.2.2A of the Environmental Impact Statement using the results of the sampling and monitoring. The Proponent shall integrate the current and predicted consumption patterns of each Indigenous group identified during the environmental assessment in the updated human health risk assessment and any updated consumption pattern information provided by Indigenous groups as part of the follow-up program.		4. Data Analysis and Interpretation
6.13	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the socio-economic conditions of Indigenous Peoples as a result of changes to access, availability and quality of country foods. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	Appendix 8: 2022 Country Foods and Socio-economic Conditions Follow-up Program: Current Conditions Report	

7.1 Monitoring and Analysis

As outlined in Table 7-1 above, detailed regarding the 2022 monitoring activities done in support of condition 6.11 and 6.13 are provided in Appendix 7 and Appendix 8 respectively. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results, and recommendations. Table 7-2 below summarizes the monitoring results and recommendations for work, it also specifies where further information on each item can be found in the Appendices.

No adaptive management actions were required, and future monitoring will occur as described in the CFMP and the *Country Foods and Scio-economic Conditions Follow-Up Program.*

Table 7-2: Summary of DS condition 6.11 follow-up monitoring

Monitoring	Survey/Methodology	Dates	Results Summary
Surface Water Quality	Appendix 7, Section 3.1 (Entia Environmental Consultants Ltd., 2023)	October – December 2022 (Entia Environmental Consultants Ltd., 2023)	**Appendix 7, Section 2.2.2.2** Since there was no effluent discharge to surface water from the Project during the monitoring period, statistically significant changes to water quality would not be expected. It is possible that the apparent statistically significant changes in water quality for iron (decrease at control sites, slight increase at impact sites) and manganese (increase at control sites, no change at impact site) may be a result of seasonal differences. The monitoring period in 2022 (the "after" period) included October to December only, while the baseline datasets (the before" period) included all months of the year. This issue may be resolved in 2023, when the "after" monitoring period includes all calendar months rather than just the last quarter of the year. Since average (mean) COPC concentrations are less than baseline or predicted NPM concentrations, no change to mitigation is necessary. As there were no discharges to surface water from the Project during the monitoring period in 2022, the results of this year's monitoring program are in line with expectations (i.e.: no Project effects). (Entia Environmental Consultants Ltd., 2023)
Air Quality Monitoring	Appendix 7, Section 3.2 (Entia Environmental Consultants Ltd., 2023)	N/A	**Appendix 7, Section 3.2** As 2022 was a transitional period between baseline (January to September 2022) and Construction phase (October to December 2022) during which some early works construction activities were conducted, soil or dust fall data were not obtained during the early works construction period to derive estimates of inhalable PM10 associated metals. Soil and dustfall metal data were only obtained during baseline studies (august and September 2022), prior to initiation of early works construction activities. Soil and dustfall metal data are planned to be collected in 2023 and future CFMP annual reports will include analysis and reporting of inhalable PM10 associated metals. (Entia Environmental Consultants Ltd., 2023)
Country Foods Conditions	Appendix 8, Section 1.3 (ERM, 2023c)	2021 - 2022	**Appendix 8, Section 2.1** The current understanding of baseline conditions for the Lhoosk'uz Dené nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 3.1** The current understanding of baseline conditions for the Ulkatcho nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 4.1** The current understanding of baseline conditions for the Saik'uz First Nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 5.1** The current understanding of baseline conditions for the Stellat'en First Nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 6.1** The current understanding of baseline conditions for the Nadleh Whut'en nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 7.1** The current understanding of baseline conditions for the Nazko First Nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 8.1** The current understanding of baseline conditions for the Skin Tyee First Nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 9.1** The current understanding of baseline conditions for the Nee-Tahi-Buhn Band nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 10.1** The current understanding of baseline conditions for the Tŝilhqot'in Nation country foods relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 11.1** The current understanding of baseline conditions for the Métis nation country foods relative to the monitoring area are discussed. (ERM, 2023c)
Drinking Water Conditions	Appendix 8, Section 1.3 (ERM, 2023c)	2021 - 2022	**Appendix 8, Section 2.2** The current understanding of baseline conditions for the Lhoosk'uz Dené nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 3.2** The current understanding of baseline conditions for the Ulkatcho nation drinking water relative to the monitoring area are discussed. (ERM, 2023c)

Monitoring	Survey/Methodology	Dates	Results Summary
			Appendix 8, Section 4.2 The current understanding of baseline conditions for the Saik'uz First Nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 5.2** The current understanding of baseline conditions for the Stellat'en First Nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 6.2** The current understanding of baseline conditions for the Nadleh Whut'en nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 7.2** The current understanding of baseline conditions for the Nazko First Nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 8.2** The current understanding of baseline conditions for the Skin Tyee First Nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 9.2** The current understanding of baseline conditions for the Nee-Tahi-Buhn Band nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 10.2** The current understanding of baseline conditions for the Tŝilhqot'in Nation drinking water relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 11.2** The current understanding of baseline conditions for the Métis nation drinking water relative to the monitoring area are discussed (ERM, 2023c)
Socio-economic Conditions	Appendix 8, Section 1.3 (ERM, 2023c)	2021 - 2022	**Appendix 8, Section 2.3** The current understanding of baseline conditions for the Lhoosk'uz Dené nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 3.3** The current understanding of baseline conditions for the Ulkatcho nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 4.3** The current understanding of baseline conditions for the Saik'uz First Nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 5.3** The current understanding of baseline conditions for the Stellat'en First Nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 6.3** The current understanding of baseline conditions for the Nadleh Whut'en nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 7.3** The current understanding of baseline conditions for the Nazko First Nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 8.3** The current understanding of baseline conditions for the Skin Tyee First Nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 9.3** The current understanding of baseline conditions for the Nee-Tahi-Buhn Band nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c)

Monitoring	Survey/Methodology	Dates	Results Summary
			Appendix 8, Section 10.3 The current understanding of baseline conditions for the Tŝilhqot'in Nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c) **Appendix 8, Section 11.3** The current understanding of baseline conditions for the Métis nation socio-economic conditions relative to the monitoring area are discussed. (ERM, 2023c)

8 Air Quality (6.12)

The *Air Quality and Fugitive Dust Management Plan* (AQDMP, (Blackwater Gold Ltd., 2023a)) was developed to address several conditions relating to air quality and fugitive dust, including 6.12 of the DS. It was designed to identify the Project's fugitive dust-emitting sources and mitigation and contingency measures if primary control measures are not effectively controlling dust emissions.

> **6.12** The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples as a result of changes to air quality and determine the effectiveness of mitigation measures. As part of the implementation of the follow-up program, the Proponent shall monitor nitrogen dioxide (NO2), sulfur dioxide (SO2), fine particulate matter (PM2.5), particulate matter (PM10), dust, and carbon monoxide (CO) in air. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.

Based on the progress of the project to date (Section 1.1), the field programs collected information focused on monitoring the impacts of those activities summarized below:

- Land clearing and earthworks for the construction camp and plant site.
- Construction and use of unpaved access and mine roads.
- Material handlings.re-handling at aggregate and topsoil stockpiles.
- Parking lot and road grading

The *Air Quality and Fugitive Dust Management Annual Report 2022* (Blackwater Gold Ltd., 2023a)(Appendix 6) presents the results of the 2022 monitoring program, while the results of those monitoring activities driven by the DS between January 1 – March 31, 2023 are presented in Appendix 11.

This section provides an overview of monitoring, results, and adaptive management that occurred during the reporting period to support compliance with DS 6.12. Full details can be reviewed in Appendix 6 and Appendix 11.

8.1 Monitoring and Analysis

As outlined above, details regarding the monitoring activities done in support of condition 6.12 are provided in Appendix 6 and Appendix 11. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 8-1 below summarizes the monitoring results and recommendations for work done, it also specifies where further information on each item can be found in the Appendices.

Particulate matter monitoring through the *Air Quality and Fugitive Dust Management Plan* triggered adaptive management. This event occurred in December 2022, and resulted in a ‘Low’ trigger level exceedance, details are presented in Table 8-1.

Table 8-1: Summary of DS condition 6.12 follow-up monitoring

Monitoring	Survey/Methodology	Dates	Results Summary	Adaptive Management/Recommendations
Dustfall Monitoring	Appendix 6, Section 6.4.2 (Blackwater Gold Ltd., 2023a)	August – September 2022 (Blackwater Gold Ltd., 2023a)	**Appendix 6, Section 6.4.2** Dustfall samples were collected from eight locations for baseline data for the baseline CFMP (August – September 2022). Results are presented in Appendix C. Station 027 had the highest total dustfall of 2.58 mg/dm2-day. Only five metals identified as a Contaminant of Potential Concern (COPCs) for human health (Entia 2021a, 2021b) were detectable in dust samples collected in both or one of the two areas (near-field or control): aluminum, cadmium, lead, manganese, and zinc. (Blackwater Gold Ltd., 2023a)	**Appendix 6, Section 8.0** The results from the CFMP Dustfall monitoring program should be used in conjunction with visual dust monitoring. (Blackwater Gold Ltd., 2023a)
Particulate Matter Monitoring	Appendix 6, Section 6.4.3 (Blackwater Gold Ltd., 2023a)	October – December 2022 (Blackwater Gold Ltd., 2023a) March 2023 (Blackwater Gold Ltd., 2023c)	**Appendix 6, Section 6.4.3** In total eleven particulate matter samples (PM2.5 and PM10) were collected between October and December 2022. No particulate matter samples exceeded any objective or standard. The highest concentration of both PM2.5 and PM10 was observed on December 19th, 2022, with a concentration of 14.8 µg/m^3. The high concentrations could be attributed to the construction fire that occurred at site on December 17. Baseline PM10 concentration (9 µg/m^3) was exceeded on December 19th, 2022, and PM2.5 baseline concentration (4 µg/m^3) was exceeded on November 14, December 1st, and 19th, 2022. The annual average PM2.5 concentration was 4.55 µg/m^3. The trigger level for this exceedance is low. (Blackwater Gold Ltd., 2023a) **Appendix 11, Section 1.0** In total four particulate matter samples (PM$_{2.5}$ and PM$_{10}$) were collected in March 2023. Particulate matter data was not collected between December 19th, 2022, and March 13th, 2023, due to a cassette installation error, system faults due to power outages, and user error. Based on the analytical results, no samples exceeded any of the applicable provincial or federal objectives or standards; however, the baseline PM_{10} concentration (9 µg/m^3) was exceeded on March 13th and 31st and the baseline $PM_{2.5}$ concentration (4 µg/m^3) was exceeded on March 13th, 19th and 31st. The highest $PM_{2.5}$ concentration was 6.6 µg/m^3 observed on March 13th and the highest PM_{10} concentration was 9.6 µg/m^3 observed on March 31st, 2023. The particulate matter samples compared to the predicted baseline concentrations are above; however, are below the federal and provincial objectives and standards. As such, no adverse health effects for human receptors are likely to occur. (Blackwater Gold Ltd., 2023c)	**Appendix 6, Section 7.7 and 8.0** The baseline PM10 concentration (9 µg/m^3) was exceeded on December 19th, 2022(14.8 µg/m^3), and the PM2.5 baseline concentration (4 µg/m^3) was exceeded on November 14 (5.9 µg/m^3), December 1st (6.4 µg/m^3) and 19th (14.8 µg/m^3), 2022. As per the TRP in the AQFDMP, monitoring via the Partisol sampler continued and a casual analysis was done to identify potential sources and mitigations. Through this process two potential causes were identified: - Operation of the wood burning furnace in the maintenance building during sampling events; and, - A construction fire on December 17th Based on these findings it was recommended that operation of the wood burning furnace not occur during sampling events, or the sampler be moved. These were proposed with the goal of supporting representative site samples (Blackwater Gold Ltd., 2023a). In was determined that the Partisol sampler will be relocated in 2023. **Appendix 11, Section 1.0** In 2023 training on the operation and maintenance of the sampling unit will be provided to relevant onsite personnel to reduce the likelihood of those preventable events in the future. (Blackwater Gold Ltd., 2023c)
Nitrogen dioxide and Sulfur Dioxide Monitoring	Appendix 6, Section 6.4.4 (Blackwater Gold Ltd., 2023a)	N/A	**Appendix 6, Section 6.4.4** Nitrogen dioxide (NO_2) and Sulfur Dioxide (SO_2) passive air samples were not collected as part of the air quality monitoring in 2022. The passive air sampling system (PASS) apparatus was installed at the exploration camp near the Partisol sampler(Blackwater Gold Ltd., 2023a) **Appendix 11, Section 2.0** The first sampling event for Nitrogen Dioxide (NO_2) and Sulfur Dioxide (SO_2) passive air samples initiated on February 23rd, 2023, with collection occurring on March 25th, 2023. No samples exceeded the applicable provincial or federal objectives or standards, although it was identified that the passive sampling units used on site should be collected following between 7 – 15 days. (Blackwater Gold Ltd., 2023c)	**Appendix 11, Section 2.0** Passive sampling units will be collected 7 – 15 days following deployment when safe to do so.(Blackwater Gold Ltd., 2023c)

Carbon monoxide	Appendix 6, Section 6.4.5 (Blackwater Gold Ltd., 2023a)	N/A	**Appendix 6, Section 6.4.5** Carbon monoxide monitoring was not completed in 2022. (Blackwater Gold Ltd., 2023a)	**Appendix 6, Section 8.0** CO monitoring has been implemented in 2023. Weekly sampling began in May and will continue as per the AQFDMP.

9 Effects on Moose (6.14)

The purpose of the *Wildlife Mitigation and Monitoring Plan* (WMMP) (ERM, 2022i) is to manage impacts on wildlife in the Blackwater Project area during Construction, Operations, Closure, and Post-closure.

The *2022 Wildlife Mitigation and Monitoring Program Compliance Report* (ERM, 2023b),(Appendix 5) summarizes and presents the results of the follow up programs and monitoring of mitigation measures during 2022, while the results of January – March 31, 2023 monitoring is presented in *Blackwater 2023 Q1 Wildlife Monitoring Activity* (Appendix 12). This follow-up program includes monitoring for moose required by condition 6.14 of the DS in Section 3.1.

> **6.14** The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, develop a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse effects from the Designated Project on moose (*Alces alces*) and determine the effectiveness of mitigation measures. As part of the implementation of the follow-up program, the Proponent shall conduct winter distribution and density surveys for moose (*Alces alces*) starting prior to construction and until the end of operation. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.

9.1 Monitoring and Analysis

As outlined above, details regarding monitoring activities done in support of condition 6.14 are provided in Appendix 5 and Appendix 12. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 9-1 below summarizes the monitoring results and recommendations and identifies where further information on each item can be found in the Appendices.

No adaptive management actions were required, and future monitoring will occur as described in the *Wildlife Mitigation and Monitoring Plan* (ERM, 2022i). This will include additional analysis of ungulate distribution and density when additional years of monitoring are completed, and snow track surveys in 2023.

Table 9-1: Summary of DS condition 6.14 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results
Moose	**Appendix 5, Section 2.2.2** Habitat Loss monitoring (ERM, 2023b)	2022 (ERM, 2023b)	**Appendix 5, Section 2.2.3** Clearing completed in 2022 was limited to the Plant Site area, which accounted for 26.4 ha of disturbance. It was determined that there was a reduction in moose habitat for the growing season (26.4 ha). (ERM, 2023b)
	Appendix 5, Section 2.3.3.3 Moose-vehicle collision monitoring (ERM, 2023b)	N/A	**Appendix 5, Section 2.3.4** No interactions, incidents, mortalities, or vehicle collisions were recorded during 2022. (ERM, 2023b)
	Appendix 5, Section 3.1.2.1 Ungulate pellet counts (ERM, 2023b)	June 2022 (ERM, 2023b)	**Appendix 5, Section 3.1.3.1** In total, 22 ungulate pellet count transects were established at varying distances from the proposed Project footprint. Moose pellets were detected at the majority of transects (17 of 22). Moose pellets were most commonly winter pellets (Distance = 66, Quadrat = 9), with some spring pellets (Distance = 29, Quadrat = 1) and fewer summer pellets (Distance = 11, Quadrat = 2). As this was the first year of surveying, pellet age varied. Nearly half of the pellet groups counted were expected to have been deposited within the last year. As such, results from the first year of sampling do not indicate overall density but provide an initial idea of moose distribution and relative density. (ERM, 2023b)
	Appendix 12, Section 2.2.1 Aerial-based winter ungulate survey (ERM, 2023j) **Appendix 12, Section 2.2.2** Ground-based ungulate winter survey (ERM, 2023j)	March 3 – 5, 2023	**Appendix 12, Section 2.3** A total of 37 individual track locations or animals were observed during ground-based surveys. Species included moose, lynx, wolf, coyote, porcupine, river otter, and deer. For ungulate species, a total of 21 moose and 1 deer tracks or animals were observed. A total of 560 individual track locations or animals were observed during aerial surveys. Species included moose, lynx, wolf, coyote, otter, and mountain goat. For ungulate species, a total of 390 moose and 10 mountain goat tracks or animals were observed. The most abundant species for both surveys were moose followed by lynx. Moose were most frequently recorded in the central and northern transects of the Study Area for both survey types. (ERM, 2023j)

10 Effects on Caribou (8.18.6)

The *Caribou Mitigation and Monitoring Plan* (CMMP) (ERM, 2022c) is intended to describe the mitigation and monitoring measures that will be implemented to avoid, reduce and offset the Projects adverse effects on caribou and their critical habitat as defined in the recover Strategy for the Woodland Caribou, Southern Mountain Population (*Rangifer tarandus caribou*) (Environment Canada 2014, or as updated from time to time). The caribou monitoring programs include adaptive management and details of the follow-up programs to address regulatory requirements, including DS condition 8.18.6:

> **8.18.6** For any offsetting required pursuant to condition 8.17, the Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, and to the satisfaction of Environment and Climate Change Canada, a compensation plan for southern mountain caribou (*Rangifer tarandus caribou*). When developing the compensation plan, the Proponent shall take into account habitat needs for migratory birds and listed species at risk. The Proponent shall implement the compensation plan from the beginning of construction. The compensation plan shall include… a description of the follow-up program the Proponent shall implement to determine the effectiveness of the mitigation measures included in the compensation plan. As part of the development of the follow-up program, the Proponent shall determine, in consultation with Indigenous groups, the methods, timing and frequency for conducting winter surveys for caribou abundance and distribution within the Designated Project area. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program.

Section 6.2.2.2 of the CMMP specifically describes the methods, timing, and frequency for conducting winter surveys for caribou abundance and distribution in the Designated Project area.

The *2022 Wildlife Mitigation and Monitoring Program Compliance Report* (ERM, 2023b),(Appendix 5) summarizes and presents the results of the follow up programs and monitoring of mitigation measures during 2022, while the results of January – March 31, 2023 monitoring is presented in *Blackwater 2023 Q1 Wildlife Monitoring Activity* (Appendix 12). This follow-up program includes monitoring for caribou required by condition 8.18.6 of the DS in Section 3.2.

10.1 Monitoring and Analysis

As outlined above, details regarding the 2022 monitoring activities done in support of condition 8.16.8 are provided in Appendix 5 and Appendix 12. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 10-1 below summarizes the monitoring results and recommendations and identifies where further information on each item can be found in the Appendices.

No adaptive management actions were required, and future monitoring will occur as described in the *Wildlife Mitigation and Monitoring Plan* (ERM, 2022i). This will include additional analysis of ungulate distribution and density when additional years of monitoring are completed, and snow track surveys in 2023.

Table 10-1: Summary of DS condition 8.18.6 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results
Caribou	**Appendix 5, Section 3.1.2.1** Ungulate pellet counts (ERM, 2023b)	June 2022 (ERM, 2023b)	**Appendix 5, Section 3.1.3.1** In total, 22 ungulate pellet count transects were established at varying distances from the proposed Project footprint. No caribou pellets were observed. (ERM, 2023b)
	Appendix 12, Section 2.2.1 Aerial-based winter ungulate survey (ERM, 2023j) **Appendix 12, Section 2.2.2** Ground-based ungulate winter (ERM, 2023j) survey	March 3 – 5, 2023	**Appendix 12, Section 2.3 and 3** No caribou tracks or other signs were observed during survey efforts, nor incidentally. (ERM, 2023j) These findings are consistent with baseline and existing field data collected for the Project between 2012 and 2021. Ground-based and aerial animal and track surveys completed in March 2012, December 2015, and February 2018 did not report any caribou. However, an aerial snow track survey in December 2021 reported a total of three caribou tracks. An incidental observation in February 2018 on top of Mt. Davidson also recorded a likely caribou track. Additionally, collar data (1980-2020) indicate that the Project is not within a current movement corridor and appears to only be used intermittently by caribou. (ERM, 2023j)
	Appendix 5, Section 3.2.2 Caribou offset monitoring program (ERM, 2023b)	N/A	**Appendix 5, Section 3.2.2** The caribou offset monitoring program consists of four separate monitoring programs, including road restoration monitoring, access monitoring, sight lines monitoring, and wildlife use monitoring. The caribou offset monitoring program was not implemented in 2022, although some modelling work and preliminary discussions took place and it's anticipated that further work will be completed in 2023 following the plan presented in the *Caribou Mitigation and Monitoring Plan*. (ERM, 2023b)
	Appendix 5, Section 2.3.3.1 Incidental Observations (ERM, 2023b)	N/A	**Appendix 5, Section 3.2.3.2** Two potential caribou game trails were identified during white bark pine and Clark's nutcracker surveys. No other caribou observations or signs were recorded in 2022. (ERM, 2023b)

11 Whitebark Pine (8.20.5)

The *Whitebark Pine Management Plan* (WPMP) (ERM, 2022h) was developed to address a number of conditions, including 8.20 and 8.20.5 of the DS. It was designed to mitigate the effects from the Project on whitebark pine (*Pinus albicaulis*); however, given that whitebark pine operates as a keystone and foundation species crucial to ecosystem function and that whitebark pine faces existential threats, goals and objectives beyond the scope of direct impact mitigation were required.

The overall goals of the WPMP are to:

- Mitigate impacts to whitebark pine caused by mine development;
- Mitigate potential impacts to regional Clark's nutcracker populations;
- Contribute to the knowledge base of deploying whitebark pine in mine reclamation;
- Contribute to the overall recovery of whitebark pine; and
- Understand baseline conditions and inform mitigation strategies implemented for whitebark pine and Clark's nutcracker.

Although reclamation has not began at site (Section 1.1), the *BW Gold Whitebark Pine Field Update – 2022* (Blackwater Gold Ltd., 2023b) (Appendix 10) summarizes the results implementing WPMP, while the *2022 Wildlife Mitigation and Monitoring Program Compliance Report* (ERM, 2023b) (Appendix 5) presents results relating to monitoring the baseline presence of the Clark's nutcracker. No additional monitoring occurred between January 1 and March 31, 2023.The results of these programs will be used to inform the analysis of future monitoring during reclamation activities.

Table 11-1 summarizes this condition of the DS and where the full details can be found in the associated appendix of this document

Table 11-1: DS condition 8.20.5 follow-up monitoring

Condition No.	Condition	Appendix	Section
8.20.5	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a whitebark pine management plan to mitigate effects from the Designated Project on whitebark pine (*Pinus albicaulis*) and its critical habitat. The Proponent shall implement the plan during all phases of the Designated Project consistent with any applicable recovery strategy related to whitebark pine (*Pinus albicaulis*). As part of the whitebark pine management plan, the Proponent shall… develop and implement a follow-up program in consultation with Indigenous groups to determine the effectiveness of the mitigation measures included in the whitebark pine management plan. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program. The follow-up program shall include:	Described in the WPMP (ERM, 2022h)	
8.20.5.1	Visual monitoring of populations of whitebark pine (*Pinus albicaulis*), including their health, within reclaimed areas at a minimum every five years; and	Appendix 10: BW Gold Whitebark Pine Field Update – 2022	
8.20.5.2	Monitoring of use of the reclaimed areas by Clark's nutcracker (*Nucifraga columbiana*) for the purpose of whitebark pine regeneration. Should the results of monitoring demonstrate that use of the reclaimed areas by Clark's nutcracker (*Nucifraga columbiana*) is not adequate, the Proponent shall implement additional mitigation measures.	Appendix 10: BW Gold Whitebark Pine Field Update – 2022 Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report	Section 3.8.3.3 Clark's Nutcracker Monitoring

11.1 Monitoring and Analysis

As outlined above in Table 11-1, details regarding the 2022 monitoring activities done in support of condition 8.20.5 are provided in Appendix 10. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 11-2 below summarizes the monitoring results and recommendations and identifies where further information on each item can be found in the Appendices. For context, Table 11-1 summarizes all monitoring done through the WPMP in 2022, which addresses requirements outside of DS condition 8.20.5. However, the information collected through this program will be used to inform future reclamation activities that relate to condition 8.20.5.

No adaptive management actions were required relative to condition 8.20.5, and future monitoring will occur as described in the WPMP. (ERM, 2022h). However, through monitoring associated with the other conditions associated with the WPMP future recommendations were made, these are summarised in Table 11-1 for reference.

Table 11-2: Summary of DS condition 8.20.5 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results	Adaptive Management/Recommendations
Whitebark Pine	**Appendix 10, Section 3.1** Stand Assessments	2022 (Blackwater Gold Ltd., 2023b)	**Appendix 10, Section 3.1** DS Condition 8.20.(d) The inventory work showed that although whitebark pine is common to some degree across much of the landscape, its degree of occupation is highly variable. The most desirable scenario is for whitebark pine to be growing on productive sites unimpeded by competition; however, the high density of subalpine fir co-occurring on the landscape indicates that competition levels are likely to increase on most sites and in many cases subalpine fir will overtake whitebark pine and dominate many sites where the two presently co-occur. Stand assessments identified competition and mountain pine beetle are most manageable threats in the near term to cone production and use by Clark's nutcrackers.	**Appendix 10, Section 4.0** Apply verbenone to plus trees to minimize losses of reproductive trees to mountain pine beetle. Develop restoration prescriptions. Daylight whitebark pine to reduce competition levels and support current and future cone production.
	Appendix 10, Section 3.2 Seedling Translocation Surveys	2022 (Blackwater Gold Ltd., 2023b)	**Appendix 10, Section 3.2** DS Condition 8.20.(a) Previously translocated seedlings/saplings were surveyed, with two dead and the remainder classed as vigorous. Of the original 20 seedlings/saplings salvaged in 2013, 18 were transplanted in the field (two died in overwinter storage), and 13 survived 9-years for a 72% field transplant survival and 65% for overall survival.	**Appendix 10, Section 4.0** Transplant whitebark only within confirmed development areas. Follow transplant methods. Transplant recipient location identified on south side of mountain.
	Appendix 10, Section 3.3 Whitebark Pine Health Surveys	2022 (Blackwater Gold Ltd., 2023b)	**Appendix 10, Section 3.3** DS Condition 8.20.(b) A total of eight health plots were sampled, consisting of five permanent transects and three 100-tree surveys. All transects showed a decline in forest health since 2013 or 2014. The greatest was a 20% decline since 2014; all health declines were due to increases in white pine blister rust.	**Appendix 10, Section 4.0** Re-measures health in stands at 5-year intervals. Submit seed from highest infected stand (26% healthy) to provincial rust screening program. Establish field-based rust monitoring transects to study a greater sample of parent trees. Confirm field trial design, area required, and prepare field sites for trials.
	Appendix 10, Section 3.4 Whitebark Pinecone Collection	2022 (Blackwater Gold Ltd., 2023b)	**Appendix 10, Section 3.4** DS Condition 8.20.(b) In 2022, a large cone crop was present, and cones were collected from 26 permanently marked plus trees. An additional three trees were identified for cone collection, but no seeds were recovered from these trees due to poor cone condition. The cone collection yielded a total of 13.64 kg of seed with an estimated yield of 109,128 seeds.	
	Appendix 10, Section 3.5 Field Trial Location Identification	2022 (Blackwater Gold Ltd., 2023b)	**Appendix 10, Section 3.5** DS Condition 8.19. Field trial sites were identified for seedling/sapling transplants, climate change adaptation studies, and field monitoring for white pine blister rust tolerance. Establishing each of these trials on the mountain will also serve some level of restoration on undisturbed sites via seedling planting.	**Appendix 10, Section 4.0** Develop restoration trial study design, which will include current trials and future replications on reclamation sites. All trials should include study at the individual parent tree scale. Confirm trial site size and site preparation requirements.
	Appendix 10, Section 3.6 Planting Trial and Remeasurements (Blackwater Gold Ltd., 2023b)	2022 (Blackwater Gold Ltd., 2023b)	**Appendix 10, Section 3.6** DS Condition 8.19. Planting Trial Overall, 6-year planting survival was high at 81%, which fits well within the survival rates projected by others (e.g., Jenkins et al. 2022). No rust was observed on any seedlings live or dead; though at most	**Appendix 10, Section 4.0** Develop restoration trial study design, which will include current trials and future replications on reclamation sites. All trials should include study at the individual parent tree scale.

			locations dead seedlings had decayed and were absent thus no cause of death could be attributed to any seedlings. The high survival rate indicates that establishing seedlings through planting is a viable activity on disturbed sites and extensive trials can be developed. (Blackwater Gold Ltd., 2023b) <u>Whitebark Pine Blister Rust Screening Planting</u> In 2016 a series of six planting transects were established with individual parents tracked within each transect; each transect had five seedlings from each parent planted within it, with the exception of some parents that had insufficient seedlings. Overall survival across all transects was 72% with a parent tree survival ranging from 57% to 90%; no rust was observed on any seedlings and cause of death could not be determined for any seedlings.	Confirm trial site size and site preparation requirements.
	Appendix 5, Section 3.8.2.4 Clark's nutcracker monitoring (ERM, 2023b)	July – November 2022 (Camera and ARU deployment) (ERM, 2023b) August 29 – 30, 2022 (Call playback) (ERM, 2023b)	**Appendix 5, Section 3.8.3.3** Clark's nutcrackers were identified in 187 ARU files across all sites with available data. All ARU sites had consistent Clark's nutcracker detections throughout deployment. None of the cameras detected Clark's nutcracker. Birds are difficult to monitor via remote camera due to their small size and fast movements. The lack of camera detections despite abundant Clark's nutcracker detections by ARU and call playback indicate that cameras are likely not a useful monitoring tool for this species. These surveys were conducted to obtain additional baseline data on the presence of Clark's nutcracker in the whitebark pine habitat on Mt Davidson. Three call playback (CPB) surveys were completed at every odd survey site along each transect. In summary, 55% of sites has responses. Transects with white bark pine on average had a higher percentage of call playbacks that elicited responses from Clark's nutcrackers. (ERM, 2023b)	

12 Effects on Western Toad (8.21)

The purpose of the *Wildlife Mitigation and Monitoring Plan* (WMMP) (ERM, 2022i) is to manage impacts on wildlife in the Blackwater Project area during Construction, Operations, Closure, and Post-closure.

The 2022 *Wildlife Mitigation and Monitoring Program Compliance Report* (ERM, 2023b) (Appendix 5) summarizes and presents the results of the follow up programs and monitoring of mitigation measures during 2022. No additional monitoring occurred between January 1 and March 31, 2023. This follow-up program includes monitoring for moose required by condition 8.21 of the DS in Section 3.9.

Table 12-1 summarizes this condition of the DS and where the full details can be found in the associated appendix of this document.

Table 12-1: DS condition 8.21 follow-up monitoring

Condition No.	Condition	Appendix	Section
8.21.	The Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to the effects of changes caused by the Designated Project on western toad (*Anaxyrus boreas*). The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall:	Described in the WMMP (ERM, 2022i)	
8.21.1	Conduct western toad surveys annually in breeding habitat identified pursuant to condition 8.10 from the start of construction until the end of decommissioning;	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report	3.9.2.2 Monitoring toad breeding ponds
8.21.2	Monitor western toad (*Anaxyrus boreas)* in relocation areas for western toad (*Anaxyrus boreas*) salvage conducted pursuant to condition 8.11; and	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report	3.9.2.2 Monitoring toad breeding ponds
8.21.3	Monitor western toad (*Anaxyrus boreas*) mortality on project roads from the start of construction until the end of decommissioning.	Appendix 5: 2022 Wildlife Mitigation and Monitoring Program Compliance Report	3.9.2.1 Monitoring toad mortality on roads

12.1 Monitoring and Analysis

As outlined in Table 12-1 above, detailed regarding the monitoring activities done in support of condition 8.21 are provided in Appendix 5. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 12-2 below summarizes the monitoring results and recommendations for work done, it also specifies where further information on each item can be found in the Appendices.

No adaptive management actions were required, and future monitoring will occur as described in the *Wildlife Mitigation and Monitoring Plan* (ERM, 2022i).

Table 12-2: Summary of DS condition 8.21 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results
Western Toad	**Appendix 5, Section 3.9.2.1** Monitoring for Toad Mortalities on Road (ERM, 2023b)	N/A	**Appendix 5, Section 3.9.2.1** Monitoring of toad mortality on roads was not completed in 2022 because the Project had not begun Construction during the applicable monitoring period. (ERM, 2023b)
	Appendix 5, Section 3.9.2.2 Monitoring Toad Breeding Ponds (ERM, 2023b)	August 30 – September 10, 2022, (ERM, 2023b)	**Appendix 5, Section 3.9.3.1** Surveys were completed to confirm amphibian breeding locations at 109 sites within the LSA. In total, 36 amphibian breeding sites were identified. Western toads were recorded at 34 sites, with 21 confirmed breeding sites. Breeding was also confirmed at 19 sites for Columbia spotted frog, and 10 sites for wood frog. Six sites suitable as potential relocation sites for future amphibian salvage were also identified. Findings from this survey have been incorporated into the Amphibian Pre-Clearing and Salvage SOP (ERM, 2023b)
	Appendix 5, Section 2.1.2.1 Amphibian Salvage (ERM, 2023b)	September 14 and 15, 2022 (ERM, 2023b)	**Appendix 5, Section 2.1.3.1** Amphibian salvage was completed at the wetland southeast of the Early Works Plant Site. In total, 20 Columbia spotted frog metamorphs were salvaged and relocated without incident in accordance with general wildlife permit #SM22-746546. The relocation site was chosen by a QP Biologist based on the presence of various Columbia spotted frog life stages (current and historical), suitability for breeding and overwintering habitat, and similarity in pH and water temperature to the salvage site. (ERM, 2023b)
	Appendix 5, Section 2.3.3.1 Incidental Observations (ERM, 2023b)	N/A	**Appendix 5, Section 3.9.3.2 and 3.9.3.3** Amphibians, specifically Columbia spotted frog and western toad, were incidentally found at the wetland southeast of the Early Works Plant Site by onsite environmental personnel. This resulted in the amphibian salvage described above. One other incidental observation of western toad was recorded in 2022. Western toad eggs and tadpoles were observed in a ditch along a decommissioned spur in a large cut block at kilometre 6 of the mine site access road. (ERM, 2023b)

13 Effects on Bats (8.22)

The purpose of the *Wildlife Mitigation and Monitoring Plan* (WMMP) (ERM, 2022i) is to manage impacts on wildlife in the Blackwater Project area during Construction, Operations, Closure, and Post-closure.

The *2022 Wildlife Mitigation and Monitoring Program Compliance Report* (ERM, 2023b) (Appendix 5) summarizes and presents the results of the follow up programs and monitoring of mitigation measures during 2022. Pre-clearing surveys for bat hibernacula occurred in March 2023 (Appendix 13). This follow-up program includes monitoring for bats required by condition 8.22 of the DS in Section 3.5.

> **8.22** The Proponent shall develop, in consultation with Indigenous groups, and implement a follow-up program to monitor little brown myotis (Myotis lucifugus) and northern myotis (Myotis septentrionalis) usage of buffer zones established pursuant to condition 8.14 and roosting structures installed and maintained by the proponent pursuant to condition 8.15 to determine the effectiveness of the mitigation measures. The Proponent shall implement the follow-up program during construction and operation and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.

13.1 Monitoring and Analysis

As outlined above, details regarding the monitoring activities done in support of condition 8.22 are provided in Appendix 5 and Appendix 13. These programs were implemented and developed by QPs, and include detailed summaries of methodologies, study locations, results and recommendations. Table 13-1 below summarizes the monitoring results and recommendations and identifies where further information on each item can be found in the Appendices.

No adaptive management actions were required, and future monitoring will occur as described in the *Wildlife Mitigation and Monitoring Plan* (ERM, 2022i).

Table 13-1: Summary of DS condition 8.22 follow-up monitoring

Monitoring	Survey/Methodology	Timing	Results
Bats	**Appendix 13** Pre-clearing surveys	March 2023	**Appendix 13** Pre-clearing surveys were done in March 2023. No bat hibernacula were observed.
	Appendix 5, Section 3.5.2.1 Bat Distribution and Buffer Zone Monitoring (ERM, 2023b)	July 12 – November 2, 2022, (ERM, 2023b)	**Appendix 5, Section 3.5.3.1** Surveys were conducted as part of additional baseline data collection for bat species presence and distribution. No roost or hibernacula sites were buffered in 2022 so no monitoring of buffered areas occurred. A total of 6 ARUs were deployed to detect for the presence of bats. Three ARUs were deployed in wetlands within the Project LSA and three ARUs were deployed within the Matthews Creek Wetland Offset Area. Data in the mine site area were collected for additional baseline; no clearing or construction activities took place during the bat roosting season, so no compliance monitoring was completed. After analysis of ARU files using the Kaleidoscope Pro auto-ID function and manual vetting, three species were detected with high or moderately high confidence (i.e., had many clear diagnostic calls recorded) in the mine site area: little brown myotis, silver-haired bat, and western small-footed myotis. (ERM, 2023b)
	Appendix 5, Section 3.5.2.2 Bat Roosting Structures (ERM, 2023b)	September 1, 2022, (ERM, 2023b)	**Appendix 5, Section 3.5.3.2** Installation of three bat roosting structures (BrandenBark) were placed in semi-open and closed habitat types within the Matthews Creek Wetland Offset Area boundary. Each structure was attached to a tree approximately 3.5 m from the ground. (ERM, 2023b)
	Appendix 5, Section 3.5.2.3 NABAT Monitoring (ERM, 2023b)	N/A	**Appendix 5, Section 3.5.2.3** BW Gold is currently engaged with ECCC on the initiation of a NABAT monitoring program at the Project. The program is anticipated to follow the NABAT programs standard methods. The design process for the program is currently ongoing and was not initiated in 2022. The final design and implementation of the NABAT monitoring program will be included in future years. (ERM, 2023b)
	Appendix 5, Section 2.3.3.1 Incidental Observations (ERM, 2023b)	N/A	**Appendix 5, Section 3.5.3.3** No incidental observations or detections of bats were made in 2022. (ERM, 2023b)

14 References

Artemis Gold Inc. (2023). *Federal Decision Statement Condition 3.15.*

BC EAO. (2019a). *Assessment Report for Blackwater Gold Mine Project (Blackwater) with Respect to the Application by New Gold Inc for an Environmental Assessment Certificate pursuant to the Environmental Assessment Act, S.B.C. 2002, c.43.*

BC EAO. (2019b). *Summary Assessment Report for Blackwater Gold Mine Project (Blackwater) with respect to the application by new Gold Inc. for an Environmental Assessment Certificate Pursuant to the Environmental Assessment Act, S.B.C. 2002, c. 43.*

BC EAO. (2019c). *In the matter of the Environmental Assessment Act S.B.C., 2002, c. 43 (the Act) and in the matter of an Application for an Environmental Assessment Certificate (Application) by New Gold Inc. (Proponent) for the Blackwater Gold Project Environmental Assess.*

Blackwater Gold Ltd. (2023a). *Air Quality and Fugitive Dust Management Annual Report 2022.*

Blackwater Gold Ltd. (2023b). *BW Gold Whitebark Pine Field Update - 2022.*

Blackwater Gold Ltd. (2023c). *Additional January 1 – April 1, 2023 Air Quality Data.*

CEA Agency. (2019). *Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 to New Gold Inc. for the Blackwater Gold Project .*

Ecologic Consulting Ltd. (2023). *Blackwater Gold Project Wetland Mapping and Assessment Baseline.*

Entia Environmental Consultants Ltd. (2022). *Country Foods Monitoring Program C.1.*

Entia Environmental Consultants Ltd. (2023). *Country Foods Monitoring Plan: Environmental Assessment Certificate Condition 41 Annual Report 2022 B.1.*

ERM. (2021). *Blackwater Grizzly Bear and Moose Habitat Suitability Modelling Assessment Report.* Project Number: 0575928-0003.

ERM. (2022a). *Air Quality and Fugitive Dust Management Plan D.1.* Project Number: 0575928-0003.

ERM. (2022b). *Aquatic Effects Monitoring Program Plan C.1.* Project Number: 0575928.

ERM. (2022c). *Caribou Mitigation and Moniotring Plan - Version 4.* Project Number: 0575928-0013.

ERM. (2022d). *Country Foods and Socio-Economic Conditions Follow-up Program C.1.* Project Number: 0575928-0016.

ERM. (2022e). *Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 B.2.* Project Number: 2006501.

ERM. (2022f). *Mine Site Water and Discharge Monitoring and Management Plan C.1.* Project Number: 0575928-0003.

ERM. (2022g). *Wetland Management and Offsetting Plan F.1.* Project Number: 0635833-0007.

ERM. (2022h). *Whitebark Pine Management Plan C.1.* Project Number: 0635833.

ERM. (2022i). *Willdife Mitigation and Monitoring Program H.1.*

ERM. (2023a). *2022 Aquatic Effects Moniotring Program Interpretive Report B.1.* Project Number: 0679295-08.

ERM. (2023b). *2022 Wildlife Mitigation and Monitoring Program Compliance Report B.1.* Project Number: 0679295-16.

ERM. (2023c). *Country Food and Socio-economic Conditions Follow-up Program: Current Conditions Report Rev.A.1.* Project Number: 0679176-10.

ERM. (2023d). *Follow-up Programs for Condition 3.15 of the Blackwater Gold project Decision Statement Issued under Section 54 of the Canadian Environmental Assessmenbt Act, 2012.* Project Number: 0679176-07.

ERM. (2023j). *Blackwater 2023 Q1 Wildlife Monitoring Activity.*

Hess, K. (2023). *Blackwater Gold Project - Informatin Request.* Impact Assessment Agency of Canada.

Knight Piesold Consulting. (2021). *Blackwater Gold Project Water Licence Application New Groundwater Wells Rev.A.* Project Number: VA101-457/33-18.

Knight Piesold Consulting. (2023). *2022 Hydrology and Water Temperature Baseline Report Rev.0.* Project Number: VA101-457/37-3.

Palmer. (2022a). *Blackwater Gold Project Fish and Aquatic Resoucres 2021 Field Survey Report.* Project Number: 2006501.

Palmer. (2023a). *FINAL REPORT Blackwater Gold Project Fish and Aquatic Resources 2022 Field Survey Report.* Project Number: 2006506.

Palmer. (2023b). *Follow-up Programs for Condition 3.14 of the Blackwater Gold Project C.1.* Project Number: 2006501.

Palmer. (2023c). *Follow-up Programs for Condition 3.16 of the Blackwater Mine Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012.* Project Number: 2006501.

Appendix 1: 2022 BW Gold Consultation Report

ARTEMIS GOLD INC

Memo

To: Impact Assessment Agency of Canada Date: 2023-06-29

From: BW Gold Ltd.

Subject: BW Gold Decision Statement Condition 2.11.3

This memorandum has been prepared to summarize the activities undertaken between April 1, 2022 and March 31, 2023 to fulfill condition 2.11.3 as set out in the Decision Statement **("DS")** received on April 15, 2019 under the *Canadian Environmental Assessment Act,* 2012. The DS relates to the Blackwater Gold Project (the "**Project**"), a proposed gold and silver open pit mine located in central British Columbia, owned by BW Gold Ltd. ("**BW Gold**"), a wholly-owned subsidiary of Artemis Gold Inc. ("**Artemis**"). Condition 2.11.3 requires BW Gold to report on the consultation that has occurred for each of the conditions set out in the DS that require consultation, and in particular:

> "how the Proponent considered any views and information that the Proponent received during or as a result of the consultation, including a rationale for how the views have, or have not, been integrated;"

1. Requirements of Condition 2.11.3

Condition 2.3 sets out the general framework for consultation with Lhoosk'uz Dené Nation ("**LDN**"), Ulkatcho First Nation ("**UFN**"), Nadleh Whut'en First Nation ("**NWFN**"), Saik'uz First Nation ("**SFN**"), Stellat'en First Nation ("**StFN**") or collectively with StFN, NWFN and SFN, the "**CSFNs**", Nazko First Nation ("**NFN**"), Skin Tyee Nation ("**STN**"), Tŝilhqot'in Nation ("**TN**"), Métis Nation British Columbia ("**MNBC**"), and Nee-Tahi-Buhn Band ("**NTBB**") (collectively, the "**Indigenous Groups**"), Fisheries and Oceans Canada ("**DFO**"), Environment and Climate Change Canada ("**ECCC**"), and other relevant authorities where consultation is a requirement of a condition set out in the DS. Condition 2.11.3 requires BW Gold to:

- for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation, including a rationale for how the views have, or have not, been integrated;

2. Provision of Information

BW Gold provided information to the parties listed in Section 1 (above) as required by each applicable Condition. **Schedule "A"** attached to this Memo sets out the plans/documents that were distributed to such parties to fulfill the consultation requirement in the Decision Statement. **Schedule "A"** also provides a reference to an Issues Tracking Table ("**ITT**") where the comments received from the parties referred to in Section 1 of this Memo can be found in respect of such plans/documents. The comments and responses demonstrate how BW Gold considered views and information received as a result of the consultations. BW Gold's responses in the various ITTs provide a rationale for how the views have (or have not been) been integrated into the plans/documents. The ITTs are included in **Exhibits 1-17.**

Schedules Schedule "B" and **Schedule "C"** provide the following information related to consultation with Indigenous Nations and Regulators, respectively and contain the following information:

- Date at which consultation on each DS condition was initiated;
- Date by which comments were requested;
- Date at which comments were received; and
- Date at which responses to comments was provided.

Owing to the iterative nature of the consultation, in many instances multiple rounds of comments and responses occurred with the parties set out in Section 1 of this Memo. This is reflected in the multiple date entries in the tables in **Schedule "B"** and **Schedule "C".** In addition, many of the plans/documents that were used to fulfill Decision Statement consultation requirements were used in multiple regulatory decision processes and therefore were provided for consultation multiple times.

Examples of such plans/documents used in multiple regulatory decision processes include:

- the Fish Habitat Compensation Plan for the Schedule 2 amendment,
- the Fish Offsetting Plan for the Fisheries Act Authorization, and
- multiple plans submitted as part of the Mines Act permit process (note: the Mines Act permit consultation is explained in more detail in Section 3.0 below).

3. *For Plans and Documents fulfilling Decision Statement Conditions that were Also submitted as part of the BC Mines Act Permit Process*

In addition to the consultation described earlier in this memo and detailed in **Schedule "B" and Schedule "C",** BW Gold consulted with LDN, UFN, the CSFNs on the following plans as part of the joint Mines Act/Environmental Management Act permit review process. The technical review phase formally commenced in May 2022 and concluded in December 2022.

Condition	Plan Name
3.1	Surface Erosion Prevention and Sediment Control Plan Construction Environmental Management Plan
3.2	Construction Environmental Management Plan
3.3	Knight Piesold – FWSS Design Report
3.14	Aquatic Effects Monitoring Plan – Follow-up Program
3.15	Aquatic Effects Monitoring Plan
3.16	Aquatic Effects Monitoring Plan – Follow-up Program
4.2	Wildlife Mitigation and Management Plan
4.3	Wildlife Mitigation and Management Plan
4.5	Wildlife Mitigation and Management Plan
6.3	Air Quality and Fugitive Dust Management Plan
6.8	Invasive Plant Management Plan
6.12	Air Quality and Fugitive Dust Management Plan
6.14	Wildlife Mitigation and Management Plan
6.15	Wildlife Mitigation and Management Plan
8.2	Wildlife Mitigation and Management Plan
8.4	Wildlife Mitigation and Management Plan
8.6	Wildlife Mitigation and Management Plan

8.9	Wildlife Mitigation and Management Plan Caribou Mitigation and Monitoring Plan
8.10	Wildlife Mitigation and Management Plan
8.14	Wildlife Mitigation and Management Plan
8.16	Wildlife Mitigation and Management Plan
8.17	Caribou Mitigation and Monitoring Plan
8.18	Caribou Mitigation and Monitoring Plan
8.21	Wildlife Mitigation and Management Plan
8.22	Wildlife Mitigation and Management Plan

During the technical review, LDN, UFN and the CSFNs provided multiple rounds of comments on the plans and documents and BW Gold responded to each comment. These comments and responses were tracked in an ITT, the final master version of which is included in **Exhibit 1 of Schedule "A".**

A number of relevant authorities also participated in the joint Mines Act/Environmental Management Act permit review process, including:

- FLNRORD (now FOR and WLRUS),
- Northern Health and
- EAO

Any comments received from the relevant authorities are also included in **Exhibit 1 of Schedule "A".**

Note that the joint Mines Act/Environmental Management Act permit review process consultation record has not been added to **Schedule "B"** and **Schedule "C".**

Schedule "A"

Table of Concordance - Summary

DS Condition		Document Name	Location in Document	Attached Exhibit (ITT)
3.1	The Proponent shall implement measures to control erosion and sedimentation within the Designated Project area to avoid the deposit of deleterious substances in water frequented by fish. The Proponent shall submit these measures to the Agency and to Indigenous groups before implementing them.	Early Works Erosion Prevention and Sediment Control Plan (ESC EW Plan Rev 2)	Section 4, 5, 6	**Exhibit 1**
		Construction Environmental Management Plan	Section 9.12; see also Sections 9.7, 9.9 and 9.10, Section 15.6	**Exhibit 1** **Exhibit 2**
3.2	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and Fisheries and Oceans Canada, measures to protect fish and fish habitat when undertaking activities in or near water, taking into account Fisheries and Oceans Canada's *Measures to Avoid Causing Harm to Fish and Fish Habitat*. In doing so, the Proponent shall: ▪ 3.2.1 develop, to the satisfaction of Fisheries and Oceans Canada and any other relevant authorities, and in consultation with Indigenous groups, a proposal to salvage and relocate fish prior to conducting any Designated Project activity requiring removal of fish habitat. The Proponent, if authorized under the *Fisheries Act* and its regulations, shall salvage and relocate fish in a manner consistent with their authorization.	Construction Environmental Management Plan Blackwater Gold Project Application for Authorization under Paragraph 35(2)(b) of the Fisheries Act (Non- Emergency Situations) Blackwater Gold Project Fish Habitat Compensation Plan	Section 9.12 and Appendix F – Fish Salvage Plan Appendix I	**Exhibit 1** **Exhibit 2**
3.3	The Proponent shall design, install and operate the freshwater intakes for the freshwater supply system to avoid fish entry or reduce the incidental capture, death or injury of fish through entrainment and impingement.	Fresh Water Supply System Design Report FWSS CEMP	Sections 1.3.2 and 3.3.4 and Appendix A All Sections	**Exhibit 1**

3.11	The Proponent shall develop, to the satisfaction of Fisheries and Oceans Canada and Environment and Climate Change Canada and in consultation with Indigenous groups, and implement any offsetting plan(s) related to any residual adverse effects to fish and fish habitat associated with the carrying out of the Designated Project. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation.	Blackwater Gold Project Application for Authorization under Paragraph 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	All Sections	**Exhibit 3**
		Blackwater Gold Project Fish Habitat Compensation Plan – Pursuant to Section 27.1 of the Metal and Diamond Mining Effluent Regulations	All Sections	**Exhibit 4**
3.12	The Proponent shall, for any fish habitat offsetting measure(s) proposed in any offsetting plan(s) referred to in condition 3.11 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, following consultation with Indigenous groups, Fisheries and Oceans Canada and Environment and Climate Change Canada, measures to mitigate those effects, including effects to Indigenous peoples' current use of lands and resources for traditional purposes. The Proponent shall submit these measures to the Agency before implementing them.	Blackwater Gold Project Application for Authorization under Paragraph 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	All Sections	**Exhibit 3**
		Blackwater Gold Project Fish Habitat Compensation Plan - Pursuant to Section 27.1 of the Metal and Diamond Mining Effluent Regulations	All Sections	**Exhibit 4**
		Country Foods Follow-Up Program	Section 4, 5, 6	**Not Applicable**

3.14	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Fisheries and Oceans Canada, and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall: ▪ 3.14.1 conduct parasite and pathogen inventories in Lake 01538UEUT and Lake 01682LNRS prior to enlarging Lake 01682LNRS and connecting it to Lake 01538UEUT pursuant to condition 3.13 and compare the results of the parasite and pathogen inventories for the two lakes; ▪ 3.14.2 monitor, starting when the Proponent starts to pump water into Davidson Creek and continuing through until the freshwater supply system has been decommissioned, rainbow trout (Oncorhynchus mykiss) and Kokanee (Oncorhynchus nerka) populations in Davidson Creek, including: ○ 3.14.2.1 community composition of rainbow trout (Oncorhynchus mykiss) and Kokanee (Oncorhynchus nerka), their absolute abundance, genetic structure and diversity; ○ 3.14.2.2 absolute abundance of overwintering rainbow trout juveniles; and 3.14.2.3 characteristics of spawner populations through surrogate monitoring metrics including size at 50% maturity, redd counts and spawner distribution.	DS 3.14 Follow-up Program Plan Aquatic Effects Monitoring Plan	Entire document Sections 4, 6	**Exhibit 1** **Exhibit 5**
3.15	The Proponent shall develop, in consultation with Indigenous groups and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish habitat in Davidson Creek, Creek 661 and Chedakuz Creek. The Proponent shall develop the follow-up program prior to construction and shall implement the follow-up program during all phases of the Designated Project. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall: ▪ 3.15.1 monitor water flows in Davidson Creek during the open water season from construction until decommissioning, and temperature continuously from construction until decommissioning; ▪ 3.15.2 monitor water quality in Davidson Creek, Creek 661 and Chedakuz Creek for contaminants of potential concern, including those identified in Table 5 of the environmental assessment report, during all phases of the Designated Project; and ▪ 3.15.3 monitor, during all phases of the Designated Project, groundwater quality and quantity downstream of the tailings storage facility site D, open pit, west waste rock dump and low-grade ore stockpile to confirm that groundwater quantity and quality parameters are at or below the values identified by the Proponent in the modelled predictions in Section 5 of Blackwater Gold Project: Additional Water Quality Model Sensitivity Scenario (July 20, 2017) and Section 3 of Blackwater Gold Project: Water Treatment Responses for Comments 1266, 1270, 1271, 1272, and 1273 (February 15, 2017) for nitrite and contaminants of potential concern, and to verify the effectiveness of water management measures.	DS Condition 3.15 Data Reporting Aquatic Effects Monitoring Plan Mine Site Water and Discharge Plan (MSDP)	All sections Sections 4, 6, Appendix B of the AEMP Sections 7, 8, 9	**Exhibit 1**

3.16	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to fish habitat in Tatelkuz Lake and Chedakuz Creek. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall: ▪ 3.16.1 conduct, prior to the commissioning of the freshwater supply system, fish habitat quantity and quality surveys in the Tatelkuz Lake littoral zone; ▪ 3.16.2 monitor the Tatelkuz Lake littoral zone from the commissioning of the freshwater supply system until decommissioning; and ▪ 3.16.3 monitor water flows in Chedakuz Creek between Tatelkuz Lake and the confluence with Davidson Creek during the open water season from construction until decommissioning.	DS 3.16 Follow-up Program Plan Aquatic Effects Monitoring Plan	All sections Sections 4, 6 Attachment B of the AEMP	**Exhibit 1** **Exhibit 5**
4.2	The Proponent shall deter migratory birds from using or frequenting the tailings storage facility, reclamation wetlands, pit lake and sediment control ponds until such time that water quality in these structures meets legislative requirements and water quality objectives. The Proponent shall identify the water quality objectives using an ecological risk based approach, developed in consultation with Indigenous groups and relevant authorities.	Wildlife Mitigation and Management Plan	Section 3.10 -Deterrence of Wildlife Section 4.7.2.2 – Facility Waterbody Monitoring Section 4.7.3.9 - Facility Waterbody Monitoring	**Exhibit 1** **Exhibit 6**
4.3	The Proponent shall conduct pre-construction surveys for migratory birds and their habitat in the Designated Project area to validate the results of habitat suitability modelling for migratory birds, including migratory birds that are listed species at risk, conducted by the Proponent and presented in the Environmental Impact Statement and in the Blackwater Gold Project – Waterbird Memo (Response to LDN/UFN #684, 693, 697, and NWFN/StFN #964). As part of the pre-construction surveys, the Proponent shall validate the applicability of fisher (Martes pennant) habitat suitability modelling to migratory birds, as identified by the Proponent in the Blackwater Gold Project – Forest Birds (Supplemental Information in Response to 681, 683, 685, 694, 695, 703, 717, 936; and ECCC Annex 1, IR 21, 24, 25). Based on the results of the pre-construction surveys the Proponent shall, in consultation with Indigenous groups and relevant authorities, develop and implement mitigation measures for migratory bird habitat.	Wildlife Mitigation and Management Plan Construction Environmental Management Plan	Section 4.7 Table 9.9-2, Table 9-11.1, Section 13.1, Table 13.1-1, Section 15.9.1.7 Table 15.9.1	**Exhibit 1** **Exhibit 6**

4.5	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The follow-up program shall include the mitigation measures used to comply with condition 4.1 to 4.4. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	Wildlife Mitigation and Management Plan	Section 4.7	**Exhibit 1** **Exhibit 6**
5.3	The Proponent shall, for adverse environmental effects from the Designated Project on wetlands that cannot be avoided or minimized pursuant to condition 5.1, set out mitigation measures in a wetland compensation plan. The Proponent shall develop the wetland compensation plan, prior to construction, in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, and taking into account Canada's Federal Policy on Wetland Conservation, Environment and Climate Change Canada's Operational Framework for Use of Conservation Allowances and habitat needs for migratory birds, moose (Alces alces) and listed species at risk. When identifying mitigation measures, the Proponent shall select wetland restoration over enhancement and wetland enhancement over wetland creation. The Proponent shall start the implementation of the wetland compensation plan prior to the wetlands being adversely affected.	Wetlands Management and Offsetting Plan BLW-007_MineSiteAdjWetlands BWG_Plant_Site_Wetlands_Memo_7Sept2022	Section 9, Section 10	**Exhibit 7**
5.4	For any wetland creation required pursuant to condition 5.3, the Proponent shall establish, prior to wetland creation and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, performance standards for wetland functions.	Wetlands Management and Offsetting Plan	Section 11.6.1	**Exhibit 7**
5.5	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the predictions of the environmental assessment as it pertains to the adverse environmental effects of the Designated Project on wetland functions and to determine the effectiveness of the mitigation measures as it pertain to wetlands. The Proponent shall implement the follow-up program during from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall: ▪ 5.5.1 conduct pre-construction surveys within the mine site to confirm the absence of red or	Wetlands Management and Offsetting Plan BWG_Listed_Wetlands_Memo_18 Aug2022.pdf	Section 7 Section 11 Section 15 Addresses condition 5.5.1 Addresses	**Exhibit 7**

	blue-listed wetlands. The Proponent shall provide the results of the survey to the Agency and to Indigenous groups prior to the start of construction. If the results of the survey demonstrate the presence of red or blue-listed wetlands within the mine site, the Proponent shall develop, prior to construction, and implement additional mitigation measures; 5.5.2 monitor changes to wetland functions of wetlands located within the mine site and remaining after vegetation clearing required to construct project components during all phases of the Designated Project; and ○ 5.5.3 monitor all compensatory wetland sites at a minimum annually, to ensure they meet or exceed performance standards for wetland functions established pursuant to condition 5.4 from the start of compensation until wetland functions are attained.	2006504_Mathews Creek MP Install Memo_June 2022 Field Summary for Shallow Groundwater Well Installations within Selected Wetlands	condition 5.5.2 Addresses condition 5.5.2	
6.3	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a protocol for receiving complaints related to the exposure to noise and dust from the Designated Project. The Proponent shall respond to any noise or dust complaint(s) within 48 hours of the complaint being received and shall implement corrective actions to reduce exposure to noise or dust in a timely manner. The Proponent shall implement the protocol during construction, operation and decommissioning.	Community Effects Monitoring and Management Plan	Section 11.2	**Exhibit 8**
		Air Quality and Dust Management Plan	Section 8.4	**Exhibit 1** **Exhibit 9**
		Noise and Vibration Management Plan	Section 11.1.4	**Exhibit 10**
6.5	The Proponent shall, in consultation with Indigenous groups, install and maintain signs indicating that consumption of surface water is not advisable in the tailings storage facility, the pit lake and Davidson Creek year-round at locations established in consultation with Indigenous groups.	Country Foods Monitoring Plan	Section 4.4	**Exhibit 11**
6.8	The Proponent shall develop and implement measures in consultation with Indigenous groups to manage invasive species within the Designated Project area.	Construction Environmental Management Plan A.1_Appendix Invasive Plant Mgmt_SOP A.1_Appendix H_Invasive Plant Monitoring SOP	Section 9.9 Vegetation Management, Table 9.9-3, Section 15.7 Vegetation Monitoring Entire document Entire Document	**Exhibit 1**
6.9	The Proponent shall determine the location of the transmission line towers in consultation with Indigenous groups, to mitigate visual effects of the transmission line where the transmission line crosses trails and sites of importance to Indigenous peoples, unless not technically and economically feasible.	Final Transmission Line Routing Plan	Sections 5.1.3 and 5.2 and Appendix B: Condition 43	**Exhibit 12**

			Mitigation	
6.11	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples caused by changes in concentrations of contaminants of potential concern in water, soil, vegetation and wildlife, including fish, and determine the effectiveness of mitigation measures. As part of the development of the follow-up program, the Proponent shall identify the vegetation and wildlife species that shall be monitored, the locations where the monitoring will be conducted, the contaminants to be monitored and the frequency of the monitoring. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. In doing so, the Proponent shall: ▪ 6.11.1 monitor, prior to construction, contaminants of potential concern in soil, vegetation, wildlife, including fish and water. The Proponent shall also co-locate soil sampling with vegetation samples and water sampling with fish samples; ▪ 6.11.2 monitor, during all phases of the Designated Project, contaminants of potential concern in water, soil, vegetation, and wildlife species; ▪ 6.11.3 if the sampling and monitoring results referred to in condition 6.11.1 and 6.11.2 exceed the predictions made during the environmental assessment, implement any modified or additional mitigation measures pursuant to condition 2.9 based on the results of the follow-up program and update the human health risk assessment identified by the Proponent in Appendix 9.2.2A of the Environmental Impact Statement using the results of the sampling and monitoring. The Proponent shall integrate the current and predicted consumption patterns of each Indigenous group identified during the environmental assessment in the updated human health risk assessment and any updated consumption pattern information provided by Indigenous groups as part of the follow-up program.	Country Foods Monitoring Plan Country Foods and Socio-economic Conditions Follow-up Program	Section 3, Section 4, Section 6 Entire document	**Exhibit 11**
6.12	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples as a result of changes to air quality and determine the effectiveness of mitigation measures. As part of the implementation of the follow-up program, the Proponent shall monitor nitrogen dioxide (NO_2), sulfur dioxide (SO_2), fine particulate matter ($PM_{2.5}$), particulate matter (PM_{10}), dust, and carbon monoxide (CO) in air. The Proponent shall implement the follow-up program during all phases of the Designated Project and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	Country Foods Monitoring Plan	Section 4.2	**Exhibit 11**
		Air Quality and Dust Management Plan	Section 8.3.5	**Exhibit 1** **Exhibit 9**
6.13	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on the socio-economic conditions of Indigenous Peoples as a result of changes to access, availability and quality of country foods. The Proponent shall implement the follow-up program from construction through	Country Foods and Socio-economic Conditions Follow-up Program	Entire document	**Exhibit 13**

	decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.			
6.14	The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, develop a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse effects from the Designated Project on moose (*Alces alces*) and determine the effectiveness of mitigation measures. As part of the implementation of the follow-up program, the Proponent shall conduct winter distribution and density surveys for moose (*Alces alces*) starting prior to construction and until the end of operation. The Proponent shall implement the follow-up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	Wildlife Mitigation and Management Plan B.1_Blackwater Moose Bear HSM Report	Section 4.4 Entire Document	**Exhibit 1** **Exhibit 6**
6.15	The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, a plan to communicate the results of the follow-up program referred to in conditions 6.11, 6.12, 6.13 and 6.14 in plain language to Indigenous groups and relevant authorities. The communication plan shall include the procedures to communicate, including the frequency of communication.	Country Foods Monitoring Plan	Section 8.2	**Exhibit 11**
		Wildlife Mitigation and Management Plan	Section 5.2	**Exhibit 1** **Exhibit 6**
7.1	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, and implement an archaeological impact assessment of the footprints of the final transmission line alignment and associated poles, roads and towers to help inform final placement of these features. The Proponent shall take into account British Columbia's Archaeological Impact Assessment Guidelines when developing and implementing the archaeological impact assessment. The Proponent shall apply the archaeological and heritage management plan pursuant to condition 7.2 to structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources discovered within the footprint of the final transmission line alignment.	Cultural and Spiritual Resources Management Plan Final Transmission Line Routing Plan	Section 10	**Exhibit 14**
7.2	The Proponent shall have a Qualified Professional develop, prior to construction and in consultation with Indigenous groups and relevant authorities, and implement, during construction, operation and decommissioning, an archaeological and heritage management plan for any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources within the Designated Project area. The archaeological resources and heritage management plan shall include: ▪ 7.2.1 protocols to respect the discovery, handling, recognition, recording, transferring and safekeeping of structures, sites or things of historical, archaeological, paleontological or architectural significance; ▪ 7.2.2 procedures to record, analyze, and mitigate the effects on cultural heritage resources and historic heritage sites, cultural sites previously identified through the heritage effects assessments conducted by the Proponent during the environmental assessment and, if applicable, the archaeological impact assessment completed for the final transmission line alignment; ▪ 7.2.3 a process for reporting information about physical and cultural heritage features and structures, sites or things of historical, archaeological, paleontological or architectural	Cultural and Spiritual Resources Management Plan	Sections 6, 8, 9, 10, 11.1 and Appendix C	**Exhibit 14**

	significance to Indigenous groups; ▪ 7.2.4 a process for informing workers of sensitive cultural areas; and ▪ 7.2.5 a chance find procedure to apply in the event that previously unidentified physical or cultural heritage features or structures, sites or things of historical, archaeological, paleontological or architectural significance are discovered by the Proponent. As part of the chance find procedure the Proponent shall: ▪ 7.2.5.1 immediately halt work at the location of the discovery, except work required to be undertaken to protect the integrity of the discovery; ▪ 7.2.5.2 delineate an area of at least 30 metres around the discovery as a no-work zone; ▪ 7.2.5.3 conduct an assessment at the location of the discovery taking into account British Columbia's Archaeological Impact Assessment Guidelines; ▪ 7.2.5.4 inform the Agency and Indigenous groups within 24 hours of the discovery, and allow Indigenous groups to monitor any work related to this discovery; and ▪ 7.2.5.5 consult with Indigenous groups and relevant authorities on the manner by which to comply with all applicable legal requirements and associated regulations, customs and protocols respecting the discovery, handling, recognition, recording, transferring and safekeeping of previously unidentified structures, sites or things of historical, archaeological, paleontological or architectural significance; and 7.2.5.6 consult Indigenous groups on the manner by which to protect the confidentiality of the discovery. The Proponent shall protect the confidentiality of the discovery in a manner that is consistent with provincial laws.			
8.2	The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, identify wildlife corridors that intersect project roads and shall install and maintain, during all phases of the Designated Project, wildlife crossing signs where the wildlife corridors intersect the project roads.	Wildlife Mitigation and Management Plan	Sections 3.6 and 4	**Exhibit 1** **Exhibit 6**
8.4	The Proponent shall, from the start of construction to the end of decommissioning, manage carrion on project roads in consultation with relevant authorities and Indigenous groups.	Wildlife Mitigation and Management Plan	Section 3.6	**Exhibit 1** **Exhibit 6**
8.6	The Proponent shall, prior to the start of construction, conduct mineral lick surveys within the Designated Project area. If the results of the surveys indicate the presence of mineral licks outside the area disturbed by Designated Project components, the Proponent shall, in consultation with Indigenous groups and relevant authorities, maintain the mineral licks in their natural state.	Wildlife Mitigation and Management Plan	Section 4.4	**Exhibit 1** **Exhibit 6**
8.9	The Proponent shall identify, prior to construction and in consultation with Indigenous groups and relevant authorities, time periods during which construction activities must be carried out to protect wildlife during sensitive life stages, including for grizzly bear (*Ursus arctos*), western toad (*Anaxyrus boreas*), wolverine (*Gulo gulo*), American marten (*Martes americana*), fisher (*Pekania pennanti*) and southern mountain caribou (*Rangifer tarandus caribou*). In doing so, the Proponent shall: ▪ 8.9.1 apply British Columbia's Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia. Interim Guidance, North Area when identifying these time periods; ▪ 8.9.2 notify, prior to construction, the Agency and Indigenous groups of these time periods	Wildlife Mitigation and Management Plan	Sections 3.3, 4	**Exhibit 1** **Exhibit 6**
		Caribou Mitigation and Monitoring Plan	Sections 3.1 and 3.2, 6.4	**Exhibit 1** **Exhibit 15**

	and of the areas within which each of these time periods shall apply; and 8.9.3 conduct construction activities during these time periods, unless not technically feasible.			
8.10	If construction during the time periods referred to in condition 8.9 for grizzly bear (*Ursus arctos*), western toad (*Anaxyrus boreas*), wolverine (*Gulo gulo*), American marten (*Martes americana*) and fisher (*Pekania pennanti*) is not technically feasible, the Proponent shall conduct pre-construction surveys to identify western toad (*Anaxyrus boreas*) breeding habitat and wolverine (*Gulo gulo*), American marten (*Martes americana*), fisher (*Pekania pennanti*) and grizzly bear (*Ursus arctos*) denning habitat and develop and implement additional mitigation measures, from construction until the end of operation, in consultation with Indigenous groups and relevant authorities. In doing so, the Proponent shall: ▪ 8.10.1 establish no work buffer zones for habitat identified during pre-construction surveys. The Proponent shall take into account British Columbia's Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia when establishing buffer zones for western toad breeding habitat and shall take into account British Columbia's Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia. Interim Guidance, North Area when establishing buffer zones for wolverine (*Gulo gulo*), American marten (*Martes americana*), fisher (*Pekania pennanti*) and grizzly bear (*Ursus arctos*) denning habitat.	Wildlife Mitigation and Management Plan	Sections 3.3, 4	**Exhibit 1** **Exhibit 6**
8.11	The Proponent shall, in consultation with Environment and Climate Change Canada, have a qualified individual salvage and relocate western toad (Anaxyrus boreas) to suitable habitat, prior to clearing activities that cannot be scheduled outside of sensitive periods pursuant to condition 8.9.	Wildlife Mitigation and Management Plan	Section 4.1, Table 3.3-1	**Not Applicable**
8.14	The Proponent shall conduct pre-construction surveys to determine the distribution of little brown myotis (*Myotis lucifugus*) and northern myotis (*Myotis septentrionalis*), and establish from construction until the end of operation, in consultation with Indigenous groups and relevant authorities, buffer zones around active hibernacula and active roosts. The Proponent shall take into account British Columbia's Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia when identifying active hibernacula and active roosts and when establishing buffer zones.	Wildlife Mitigation and Management Plan	Section 3.3 and 4.2	**Exhibit 1** **Exhibit 6**
8.16	The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, conduct pre-construction surveys to identify short-eared owl (*Asio flammeus*) moderate to high-value nesting and foraging habitat, and shall implement measures to mitigate the loss of short-eared owl (*Asio flammeus*) habitat caused by the Designated Project.	Wildlife Mitigation and Management Plan	Section 4.7	**Exhibit 1** **Exhibit 6**
8.17	The Proponent shall, during all phases of the Designated Project and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, mitigate adverse environmental effects on southern mountain caribou (*Rangifer tarandus caribou*) and its habitat, including by carrying out construction activities during time periods referred to in condition 8.9 for southern mountain caribou (Rangifer tarandus caribou). In doing so, the Proponent shall give preference to avoiding the destruction or alteration of habitat over minimizing the destruction or alteration of habitat, to minimizing the destruction or alteration of habitat over restoring	Caribou Mitigation and Monitoring Plan	Sections 3, 3.1 and 3.2	**Exhibit 1** **Exhibit 15**

	altered or destroyed habitat on-site, and to restoring altered or destroyed habitat on-site over offsetting.			
8.18	For any offsetting required pursuant to condition 8.17, the Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, and to the satisfaction of Environment and Climate Change Canada, a compensation plan for southern mountain caribou (Rangifer tarandus caribou). When developing the compensation plan, the Proponent shall take into account habitat needs for migratory birds and listed species at risk. The Proponent shall implement the compensation plan from the beginning of construction. The compensation plan shall include: ▪ 8.18.1 mapping of critical habitat of southern mountain caribou (Rangifer tarandus caribou) altered or destroyed by the Designated Project; ▪ 8.18.2 an offsetting ratio for direct habitat loss and indirect (e.g. sensory) losses based on an assessment of options, including revegetation and road closures, that consider the types of offset, location, time lags, securement, technical and economic feasibility, and probability of success; ▪ 8.18.3 field verified suitability mapping of areas to be prioritized for offsetting; ▪ 8.18.4 if residual environmental effects cannot be fully offset with habitat-based measures, a description of non-habitat measures to be implemented by the Proponent and a description of how these measures will be implemented by the Proponent, including a schedule for implementation; ▪ 8.18.5 a description of performance indicators to be used by the Proponent to evaluate the effectiveness of habitat-based and non-habitat-based compensation measures; and ▪ 8.18.6 a description of the follow-up program the Proponent shall implement to determine the effectiveness of the mitigation measures included in the compensation plan. As part of the development of the follow-up program, the Proponent shall determine, in consultation with Indigenous groups, the methods, timing and frequency for conducting winter surveys for caribou abundance and distribution within the Designated Project area. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	Caribou Mitigation and Monitoring Plan	Sections 4, 5, 6	**Exhibit 1** **Exhibit 15**
8.19	The Proponent shall conduct progressive reclamation of areas disturbed by the Designated Project. In doing so the Proponent shall identify, in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, plant species native to the Designated Project area to use for revegetation as part of progressive reclamation, including whitebark pine (*Pinus albicaulis*) and other conifers suitable to create habitat for southern mountain caribou (*Rangifer tarandus caribou*) and other species of interest to Indigenous groups.	Whitebark Pine Management Plan	Sections 2, 8.2.4 and 9.2.2 and Figure 8-2.3	**Exhibit 16**
	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a whitebark pine management plan to mitigate effects from the Designated Project on whitebark pine (Pinus albicaulis) and its critical habitat. The Proponent shall implement the plan during all phases of the Designated Project consistent with any applicable recovery strategy related to whitebark pine (Pinus albicaulis). As part of the whitebark pine management plan, the Proponent shall: ▪ 8.20.1 establish criteria to be used to evaluate the health of whitebark pine trees and for	Whitebark Pine Management Plan	Sections 9, 9.1, 9.2, 9.3, 10, 10.1 and 10.2	**Exhibit 16**

8.20	the selection of whitebark pine (Pinus albicaulis) to be transplanted; ▪ 8.20.2 collect and preserve whitebark pine (Pinus albicaulis) rust-resistant seeds within the Designated Project area prior to vegetation clearing and use them for progressive reclamation pursuant to condition 8.19; ▪ 8.20.3 identify the locations to plant whitebark pine (Pinus albicaulis) in undisturbed areas within the Designated Project area prior to construction; ▪ 8.20.4 implement measures to support whitebark pine (Pinus albicaulis) growth and use by Clark's nutcracker (Nucifraga columbiana); ▪ 8.20.5 develop and implement a follow-up program in consultation with Indigenous groups to determine the effectiveness of the mitigation measures included in the whitebark pine management plan. The Proponent shall apply conditions 2.9 and 2.10 when implementing the follow-up program. The follow-up program shall include: ○ 8.20.5.1 visual monitoring of populations of whitebark pine (Pinus albicaulis), including their health, within reclaimed areas at a minimum every five years; and ○ 8.20.5.2 monitoring of use of the reclaimed areas by Clark's nutcracker (Nucifraga columbiana) for the purpose of whitebark pine regeneration. Should the results of monitoring demonstrate that use of the reclaimed areas by Clark's nutcracker (Nucifraga columbiana) is not adequate, the Proponent shall implement additional mitigation measures.			
8.21	The Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to the effects of changes caused by the Designated Project on western toad (*Anaxyrus boreas*). The Proponent shall implement the follow- up program from construction through decommissioning and shall apply conditions 2.9 and 2.10 when implementing the follow-up program. As part of the follow-up program, the Proponent shall: ▪ 8.21.1 conduct western toad surveys annually in breeding habitat identified pursuant to condition 8.10 from the start of construction until the end of decommissioning; ▪ 8.21.2 monitor western toad (*Anaxyrus boreas*) in relocation areas for western toad (*Anaxyrus boreas*) salvage conducted pursuant to condition 8.11; and 8.21.3 monitor western toad (*Anaxyrus boreas*) mortality on project roads from the start of construction until the end of decommissioning.	Wildlife Mitigation and Management Plan	Section 3.10, 4.1	**Exhibit 1** **Exhibit 6**
8.22	The Proponent shall develop, in consultation with Indigenous groups, and implement a follow-up program to monitor little brown myotis (*Myotis lucifugus*) and northern myotis (*Myotis septentrionalis*) usage of buffer zones established pursuant to condition 8.14 and roosting structures installed and maintained by the proponent pursuant to condition 8.15 to determine the effectiveness of the mitigation measures. The Proponent shall implement the follow-up program during construction and operation and shall apply conditions 2.9 and 2.10 when implementing the follow-up program.	Wildlife Mitigation and Management Plan	Section 4.2	**Exhibit 1** **Exhibit 6**
9.3	9.3 The Proponent shall require the independent environmental monitor to prepare reports at a frequency determined in consultation with the Agency and relevant authorities that include: a description, including through photo evidence, of the Designated Project activities that occurred and the mitigation measures that were applied during the period covered by the report; and	BW Gold IEM Terms of Engagement	Section 10	**Not Applicable**

	a description, including through photo evidence, of occurrence(s) of non-compliance related to the implementation of conditions set out in this this Decision Statement observed during the period covered by the report, including: 9.3.2.1 the date of the occurrence(s) of non-compliance; 9.3.2.2 whether Designated Project activities were changed or stopped as a result of the occurrence(s) of non-compliance; 9.3.2.3 how the occurrence(s) of non-compliance was or were corrected by the Proponent and the date that the corrective action(s) was or were completed by the Proponent; and 9.3.2.4 if any, the status of pending occurrences of non-compliance that have not been corrected yet by the Proponent and a description of any adverse environmental effects associated with the occurrences of non-compliance.			
10.2	The Proponent shall, prior to construction, consult with Indigenous groups and relevant authorities on the measures to be implemented to prevent accidents and malfunctions.	Accidents and Malfunctions Admin and Comms Plan	Section 5	**Exhibit 17**
10.3	The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, develop an accident and malfunction response plan in relation to the Designated Project. The accident and malfunction plan shall include; ○ 10.3.1 the types of accidents and malfunctions that may cause adverse environmental effects; and ○ 10.3.2 the measures to be implemented in response to each type of accident and malfunction referred to in condition 10.3.1 to mitigate any adverse environmental effects caused by the accident or malfunction, including response plans for dam breaches, water treatment plant failures or shutdowns.	Accidents and Malfunctions Admin and Comms Plan	Sections 2, 7 and Table 2.2-3	**Exhibit 17**
10.5	The Proponent shall develop a communication plan in consultation with Indigenous groups. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include: ▪ 10.5.1 the types of accidents and malfunctions requiring the Proponent to notify the respective Indigenous groups; ▪ 10.5.2 the manner by which Indigenous groups shall be notified by the Proponent of an accident or malfunction and of any opportunities for the Indigenous groups to assist in the response to the accident or malfunction; and ▪ 10.5.3 the contact information of the representatives of the Proponent that the Indigenous groups may contact and of the representatives of the respective Indigenous groups to which the Proponent provides notification.	Accidents and Malfunctions Admin and Comms Plan	Sections 2 and 7, Appendix D	**Exhibit 17**

Schedule "B"

Submission Schedule for Indigenous Nations

(a) Lhoosk'uz Dené Nation and Ulkatcho First Nation

Condition	Plan Name	Date Plan Sent to Nations	Date Comments Requested from Nations	Date Comments Received	Date Responses Provided to Nations
3.1	Surface Erosion Prevention and Sediment Control Plan[2]	09-12-2021	24-12-2021	N/A[1]	
	Construction Environmental Management Plan[2]	11-08-2021 01-12-2021 09-12-2021 29-12-2021 01-04-2022	24-12-2021	29-06-2021 25-01-2022 04-04-2022 08-04-2022 11-04-2022 20-04-2022	22-09-2021 29-12-2021 25-03-2022 04-04-2022 24-05-2022
3.2	Construction Environmental Management Plan[2]	11-08-2021 01-12-2021 09-12-2021 29-12-2021 01-04-2022	24-12-2021	29-06-2021 25-01-2022 04-04-2022 08-04-2022 11-04-2022 20-04-2022	22-09-2021 29-12-2021 25-03-2022 04-04-2022 24-05-2022
3.3	Knight Piesold - FWSS Design Report[2]	05-01-2022	20-01-2022	N/A[1]	
3.11	Fish Offsetting Plan	04-11-2022 05-01-2022	20-01-2022	01-12-2021 02-12-2021 03-12-2021 27-01-2022	24-02-2022 28-10-2022 09-03-2023
	Schedule 2 Fish Compensation Plan[4]	20-04-2022 11-01-2023	29-04-2022 17-06-2022	11-06-2022 04-11-2022 13-12-2022	30-06-2022 29-08-2022 11-01-2023
3.12	Fish Offsetting Plan	04-11-2022 05-01-2022	20-01-2022	01-12-2021 02-12-2021 03-12-2021 27-01-2022	24-02-2022 28-10-2022 09-03-2023
	Schedule 2 Fish Compensation Plan[4]	20-04-2022 11-01-2023	29-04-2022 17-06-2022	11-06-2022 04-11-2022 13-12-2022	30-06-2022 29-08-2022 11-01-2023
3.14	Aquatic Effects Monitoring Plan – Follow-up Program[2]	05-01-2022 20-09-2022	20-01-2022	24-01-2022 27-01-2022 21-03-2022 16-05-2022	11-05-2022 01-06-2022 20-09-2022

				17-05-2022 18-05-2022 19-05-2022 06-30-2022 30-06-2022	
3.15	Aquatic Effects Monitoring Plan[2]	26-11-2021 23-09-2022	19-01-2022	N/A[1]	
3.16	Aquatic Effects Monitoring Plan – Follow-up Program[2]	14-01-2022 20-09-2022	29-01-2022	01-02-2022 09-02-2022 21-03-2022 13-05-2022 17-05-2022 09-06-2022 30-06-2022 21-03-2023	11-05-2022 01-06-2022 20-09-2022
4.2	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
4.3	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
4.5	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
5.3	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	01-11-2021 14-01-2022 28-01-2022 16-02-2022	24-02-2022 16-03-2022 16-12-2022
5.4	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	01-11-2021 14-01-2022 28-01-2022 16-02-2022	24-02-2022 16-03-2022 16-12-2022
5.5	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	01-11-2021 14-01-2022 28-01-2022 16-02-2022	24-02-2022 16-03-2022 16-12-2022

6.3	Community Effects Monitoring and Management Plan	05-10-2021 09-12-2021 30-12-2021	15-11-2021 24-12-2022	15-11-2021 19-11-2021	30-12-2021
	Air Quality and Fugitive Dust Management Plan[2]	09-12-2021	24-12-2022	10-09-2021	12-10-2021
	Noise and Vibration Management Plan	09-12-2021	24-12-2022	14-12-2021	29-12-2021
6.5	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022 19-01-2023	17-01-2022 07-03-2022	06-12-2021 14-01-2022 19-01-2022 26-01-2022 27-01-2022 28-01-2022 18-02-2022 10-03-2022 09-06-2022	18-01-2022 20-04-2022 28-07-2022 19-01-2023
6.8	Invasive Plant Management Plan[2]	05-01-2022	20-01-2022	N/A[2]	
6.9	Final Transmission Line Routing Plan[3]	15-10-2022 16-12-2022	31-10-2022 15-11-2022	23-11-2022	16-12-2022
6.11	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022 19-01-2023	17-01-2022 07-03-2022	06-12-2021 14-01-2022 19-01-2022 26-01-2022 27-01-2022 28-01-2022 18-02-2022 10-03-2022 09-06-2022	18-01-2022 20-04-2022 28-07-2022 19-01-2023
6.12	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022 19-01-2023	17-01-2022 07-03-2022	06-12-2021 14-01-2022 19-01-2022 26-01-2022 27-01-2022 28-01-2022 18-02-2022 10-03-2022 09-06-2022	18-01-2022 20-04-2022 28-07-2022 19-01-2023
	Air Quality and Fugitive Dust Management Plan[2]	26-11-2021	01-03-2022	10-09-2021	12-10-2021
6.13	Appendix to Country Foods Monitoring Plan	31-01-2022 18-02-2022	15-02-2022 07-03-2022	14-02-2022 10-03-2022	18-02-2022 01-03-2022 02-08-2022

6.14	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
6.15	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022 19-01-2023	17-01-2022 07-03-2022	06-12-2021 14-01-2022 19-01-2022 26-01-2022 27-01-2022 28-01-2022 18-02-2022 10-03-2022 09-06-2022	18-01-2022 20-04-2022 28-07-2022 19-01-2023
	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
7.1	Cultural and Spiritual Resources Management Plan	01-12-2021 07-03-2022 13-04-2022	07-03-2022	12-11-2021 08-12-2021 12-01-2022 26-01-2022	29-12-2021 07-03-2022 13-04-2022
7.2	Cultural and Spiritual Resources Management Plan	01-12-2021 07-03-2022 13-04-2022	07-03-2022	12-11-2021 08-12-2021 12-01-2022 26-01-2022	29-12-2021 07-03-2022 13-04-2022
8.2	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.4	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.6	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022

8.9	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2022 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
	Caribou Mitigation and Monitoring Plan[2]	12-08-2021 31-12-2021 15-03-2022	03-01-2022	08-09-2021 25-01-2022 08-02-2022 02-03-2022	15-01-2022 15-03-2022 04-07-2022
8.10	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.14	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.16	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.17	Caribou Mitigation and Monitoring Plan[2]	12-08-2021 31-12-2021 15-03-2022	03-01-2022	08-09-2021 25-01-2022 08-02-2022 02-03-2022	15-01-2022 15-03-2022 04-07-2022
8.18	Caribou Mitigation and Monitoring Plan[2]	12-08-2021 31-12-2021 15-03-2022	03-01-2022	08-09-2021 25-01-2022 08-02-2022 02-03-2022	15-01-2022 15-03-2022 04-07-2022
8.19	Whitebark Pine Management Plan	31-12-2021 18-02-2022 07-09-2022	23-02-2022 07-03-2022	09-02-2022 14-02-2022 24-02-2022	18-02-2022 26-04-2022 07-09-2022
8.20	Whitebark Pine Management Plan	31-12-2021 18-02-2022 07-09-2022	23-02-2022 07-03-2022	09-02-2022 14-02-2022 24-02-2022	18-02-2022 26-04-2022 07-09-2022
8.21	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022

					22-07-2022
8.22	Wildlife Mitigation and Management Plan[2]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	12-08-2021 28-02-2022	31-10-2021 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
10.2	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	17-01-2022	16-11-2021 23-11-2021	29-12-2021
10.3	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	17-01-2022	16-11-2021 23-11-2021	29-12-2021
10.5	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	17-01-2022	16-11-2021 23-11-2021	29-12-2021

[1] No comments received as part of the DS consultation process.

[2] This plan was also submitted for consultation as part of the Joint *Mines Act/Environmental Management Act* Application process that is described in section 3.0 of this memo.

[3] This was consulted on as part of the phase 2 Final Transmission line routing plan.

[4] Submitted to regulatory process with its own timelines.

(b) Nazko First Nation

Condition	**Plan Name**	**Date Plan Sent to Nations**	**Date Comments Requested from Nations**	**Date Comments Received**	**Date Responses Provided to Nations**
3.1	Surface Erosion Prevention and Sediment Control Plan	09-12-2021	24-12-2021	N/A[1]	
	Construction Environmental Management Plan	01-12-2021 09-12-2021 01-04-2022	24-12-2021	N/A[1]	
3.2	Construction Environmental Management Plan	01-12-2021 09-12-2021 01-04-2022	24-12-2021	N/A[1]	
3.3	Knight Piesold - FWSS Design Report	05-01-2022	20-01-2022	N/A[1]	
3.11	Fish Offsetting Plan	05-01-2022	20-01-2022	N/A[1]	
	Schedule 2 Fish Compensation Plan[3]	01-12-2021	22-12-2021	N/A[1]	

3.12	Fish Offsetting Plan	05-01-2022	20-01-2022	N/A[1]	
	Schedule 2 Fish Compensation Plan[3]	01-12-2021	22-12-2021	N/A[1]	
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	05-01-2022	20-01-2022	27-01-2022	16-02-2022 11-05-2022 01-06-2022
3.15	Aquatic Effects Monitoring Plan	26-11-2021	19-01-2022	N/A[1]	
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	14-01-2022	29-01-2022	09-02-2022	11-05-2022 01-06-2022
4.2	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
4.3	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
4.5	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
5.3	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	N/A[1]	
5.4	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	N/A[1]	
5.5	Wetlands Management Offsetting Plan	01-12-2021 16-12-2022	15-11-2021 18-01-2022	N/A[1]	
6.3	Community Effects Monitoring and Management Plan	08-10-2021 09-12-2021 30-12-2021	15-11-2021 24-12-2022	N/A[1]	
	Air Quality and Fugitive Dust Management Plan	09-12-2021	24-12-2022	N/A[1]	
	Noise and Vibration Management Plan	09-12-2021	24-12-2022	N/A[1]	
6.5	Country Foods Monitoring Plan	20-12-2021 18-02-2022	17-01-2022 07-03-2022	N/A[1]	
6.8	Invasive Plant Management Plan	05-01-2022	20-01-2022	N/A[1]	
6.9	Final Transmission Line Routing Plan[2]	15-10-2022 16-12-2022	31-10-2022	10-11-2022 28-11-2022	16-12-2022
6.11	Country Foods Monitoring Plan	20-12-2021 18-02-2022	17-01-2022 07-03-2022	N/A[1]	

		28-07-2022			
6.12	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022	17-01-2022 07-03-2022	N/A[1]	
	Air Quality and Fugitive Dust Management Plan	29-12-2021	01-03-2022	N/A[1]	
6.13	Appendix to Country Foods Monitoring Plan	20-12-2021 18-02-2022 14-04-2022	07-03-2022 29-04-2022	20-04-2022	22-08-2022
6.14	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
6.15	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022	17-01-2022 07-03-2022	N/A[1]	
	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
7.1	Cultural and Spiritual Resources Management Plan	08-10-2021 01-12-2021 13-04-2022	15-11-2021 07-03-2022	N/A[1]	
7.2	Cultural and Spiritual Resources Management Plan	08-10-2021 01-12-2021 13-04-2022	15-11-2021 07-03-2022	N/A[1]	
8.2	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.4	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022

8.6	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.9	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
	Caribou Mitigation and Monitoring Plan	12-08-2021 31-12-2021 15-03-2022	03-01-2022	30-06-2022	15-01-2022 04-07-2022
8.10	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.14	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.16	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.17	Caribou Mitigation and Monitoring Plan	12-08-2021 31-12-2021 15-03-2022	03-01-2022	30-06-2022	15-01-2022 04-07-2022
8.18	Caribou Mitigation and Monitoring Plan	12-08-2021 31-12-2021 15-03-2022	03-01-2022	30-06-2022	15-01-2022 04-07-2022
8.19	Whitebark Pine Management Plan	31-12-2021 18-02-2022 14-04-2022	23-02-2022 07-03-2022 29-04-2022	N/A[1]	
8.20	Whitebark Pine Management Plan	31-12-2021 18-02-2022 14-04-2022	23-02-2022 07-03-2022 29-04-2022	N/A[1]	

8.21	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.22	Wildlife Mitigation and Management Plan	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	28-02-2022	24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
10.2	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	01-04-2022	N/A[1]	
10.3	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	01-04-2022	N/A[1]	
10.5	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	01-04-2022	N/A[1]	

[1] No comments received as part of the DS consultation process.

[2] This was consulted on as part of the phase 2 Final Transmission line routing plan.

[3] Submitted to regulatory process with its own timelines.

(c) The Carrier Sekani First Nations

Condition	**Plan Name**	**Date Plan Sent to Nations**	**Date Comments Requested from Nations**	**Date Comments Received**	**Date Responses Provided to Nations**
3.1	Surface Erosion Prevention and Sediment Control Plan[3]	09-12-2021	24-12-2021	N/A[2]	
	Construction Environmental Management Plan[3]	01-12-2021 09-12-2021 29-12-2021 01-04-2022	24-12-2021	20-08-2021 05-01-2022 25-01-2022 31-01-2022 04-05-2022	22-09-2021 29-12-2021 25-03-2022 18-05-2022 24-05-2022
3.2	Construction Environmental Management Plan[3]	01-12-2021 09-12-2021 29-12-2021 01-04-2022	24-12-2021	20-08-2021 05-01-2022 25-01-2022 31-01-2022 04-05-2022	22-09-2021 29-12-2021 25-03-2022 18-05-2022 24-05-2022
3.3	Knight Piesold - FWSS Design Report[3]	05-01-2022	20-01-2022	N/A[2]	

3.11	Fish Offsetting Plan	05-01-2022 03-06-2022	20-01-2022	27-01-2022	20-04-2022 22-06-2022 28-10-2022 09-03-2023
	Schedule 2 Fish Compensation Plan[6]	01-12-2021	22-12-2021	15-11-2021 03-12-2021 22-12-2021 03-06-2022	29-08-2022[4] 11-01-2023
3.12	Fish Offsetting Plan	05-01-2022 03-06-2022	20-01-2022	27-01-2022	20-04-2022 22-06-2022 28-10-2022 09-03-2023
	Schedule 2 Fish Compensation Plan[6]	01-12-2021	22-12-2021	15-11-2021 03-12-2021 22-12-2021 03-06-2022	29-08-2022[4] 11-01-2023
3.14	Aquatic Effects Monitoring Plan – Follow-up Program[3]	05-01-2022 20-09-2022	20-01-2022	Jan - Aug 2022	Jan - Aug 2022
3.15	Aquatic Effects Monitoring Plan[3]	26-11-2021 20-09-2022	19-01-2022	Jan - Aug 2022	Jan - Aug 2022
3.16	Aquatic Effects Monitoring Plan – Follow-up Program[3]	14-01-2022 20-09-2022	29-01-2022	Jan - Aug 2022	Jan - Aug 2022
4.2	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
4.3	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
4.5	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
5.3	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	N/A[2]	
5.4	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	N/A[2]	

5.5	Wetlands Management Offsetting Plan	01-12-2021 16-03-2022 16-12-2022	15-11-2021 18-01-2022	N/A[2]	
6.3	Community Effects Monitoring and Management Plan	05-10-2021 09-12-2021 30-12-2021	15-11-2021 24-12-2022	N/A[2]	
	Air Quality and Fugitive Dust Management Plan[3]	09-12-2021	24-12-2022	31-01-2022	12-10-2021
	Noise and Vibration Management Plan	09-12-2021	24-12-2022	N/A[2]	
6.5	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022	17-01-2022 07-03-2022	31-01-2022 20-04-2022 28-06-2022	20-04-2022 28-07-2022
6.8	Invasive Plant Management Plan[3]	26-11-2021	20-01-2022	N/A[2]	
6.9	Final Transmission Line Routing Plan[5]	15-10-2022 16-12-2022	31-10-2022	28-11-2022	16-12-2022
6.11	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022	17-01-2022 07-03-2022	31-01-2022 20-04-2022 28-06-2022	20-04-2022 28-07-2022
6.12	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022	17-01-2022 07-03-2022	31-01-2022 20-04-2022 28-06-2022	20-04-2022 28-07-2022
	Air Quality and Fugitive Dust Management Plan[3]	12-09-2021	24-12-2021	31-01-2022	12-10-2021
6.13	Appendix to Country Foods Monitoring Plan	20-12-2021 18-02-2022 22-08-2022	07-03-2022	20-04-2022	22-08-2022
6.14	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
6.15	Country Foods Monitoring Plan	20-12-2021 18-02-2022 28-07-2022	17-01-2022 07-03-2022	31-01-2022 20-04-2022 28-06-2022	20-04-2022 28-07-2022
	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
7.1	Cultural and Spiritual Resources Management Plan	01-12-2021 13-04-2022	07-03-2022	10-12-2021	07-03-2022
7.2	Cultural and Spiritual Resources Management Plan	01-12-2021 13-04-2022	07-03-2022	10-12-2021	07-03-2022

8.2	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.4	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.6	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.9	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
	Caribou Mitigation and Monitoring Plan[3]	12-08-2021	03-01-2022	30-06-2022[1]	15-01-2022 28-04-2022 04-07-2022
8.10	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.14	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022

8.16	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.17	Caribou Mitigation and Monitoring Plan[3]	12-08-2021 31-12-2021 15-03-2022	03-01-2022	30-06-2022[1]	15-01-2022 28-04-2022 04-07-2022
8.18	Caribou Mitigation and Monitoring Plan[3]	12-08-2021	03-01-2022	30-06-2022[1]	15-01-2022 28-04-2022 04-07-2022
8.19	Whitebark Pine Management Plan	31-12-2021 18-02-2022	23-02-2022 07-03-2022	N/A[2]	
8.20	Whitebark Pine Management Plan	31-12-2021 18-02-2022	23-02-2022 07-03-2022	N/A[2]	
8.21	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
8.22	Wildlife Mitigation and Management Plan[3]	26-11-2021 30-12-2021 06-04-2022 16-07-2022	24-01-2022	27-08-2021 06-10-2021 28-02-2022	31-10-2021 24-01-2022 11-03-2022 06-04-2022 05-05-2022 16-07-2022 22-07-2022
10.2	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	17-01-2022	N/A[2]	
10.3	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	17-01-2022	N/A[2]	
10.5	Accidents and Malfunctions Admin and Communications Plan	15-11-2021 29-12-2021	17-01-2022	N/A[2]	

[1] BW Gold received these comments after notifying the CSFNs that both the BC EAO and ECCC had approved the Plan in April 2022 and informed them that the comments would be considered during the 2023 annual review of the Plan.

[2] No comments received as part of the DS consultation process.

[3] This plan was also submitted for consultation as part of the Joint *Mines Act/Environmental Management Act* Application process that is described in section 3.0 of this memo.

[4] There was an ongoing process for discussing comments between the date comments were provided and final responses were sent back.

[5] This was consulted on as part of the phase 2 Final Transmission line routing plan.

[6] Submitted to regulatory process with its own timelines.

(d) Skin Tyee Nation

Condition	Plan Name	Date Plan Sent to Nations	Date Comments Requested from Nations[1]	Date Comments Received	Date Responses Provided to Nations
3.1	Surface Erosion Prevention and Sediment Control Plan	04-01-2022	20-01-2022	N/A[3]	
	Construction Environmental Management Plan	09-12-2021	07-01-2022[2]	N/A[3]	
3.2	Construction Environmental Management Plan	09-12-2021	07-01-2022[2]	N/A[3]	
3.3	Knight Piesold - FWSS Design Report	05-01-2022	20-01-2022	N/A[3]	
3.11	Fish Offsetting Plan	05-01-2022	20-01-2022	N/A[3]	
	Schedule 2 HADD Compensation and Offsetting Plan				
3.12	Fish Offsetting Plan	05-01-2022	20-01-2022	N/A[3]	
	Schedule 2 HADD Compensation and Offsetting Plan				
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	04-01-2022	17-01-2022	N/A[3]	
3.15	Aquatic Effects Monitoring Plan	04-01-2022	19-01-2022	N/A[3]	
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	14-01-2022	29-01-2022	N/A[3]	
4.2	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
4.3	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
4.5	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
5.3	Wetlands Management Offsetting Plan	01-12-2021	18-01-2022	N/A[3]	
5.4	Wetlands Management Offsetting Plan	01-12-2021	18-01-2022	N/A[3]	
5.5	Wetlands Management Offsetting Plan	01-12-2021	18-01-2022	N/A[3]	
6.3	Community Effects Monitoring and Management Plan	09-12-2021	24-12-2022	N/A[3]	
	Air Quality and Fugitive Dust Management Plan	09-12-2021	24-12-2022	N/A[3]	
	Noise and Vibration Management Plan	09-12-2021	24-12-2022	N/A[3]	
6.5	Country Foods Monitoring Plan	20-12-2021	18-02-2022	N/A[3]	
6.8	Invasive Plant Management Plan	09-12-2021	07-01-2022[2]	N/A[3]	
6.9	Final Transmission Line Routing Plan[4]	15-10-2022	28-10-2022	N/A[1]	
6.11	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[3]	
6.12	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[3]	
	Air Quality and Fugitive Dust Management Plan	12-09-2021	24-12-2021	N/A[3]	
6.13	Appendix to Country Foods Monitoring Plan	31-01-2022	15-02-2022	N/A[3]	
6.14	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	

6.15	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[3]	
	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	
7.1	Cultural and Spiritual Resources Management Plan	07-12-2021	07-03-2022	N/A[3]	
7.2	Cultural and Spiritual Resources Management Plan	07-12-2021	07-03-2022	N/A[3]	
8.2	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
8.4	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
8.6	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
8.9	Wildlife Mitigation and Management Plan	09-12-2021	21-03-2022	N/A[3]	
	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[3]	
8.10	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	
8.14	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	
8.16	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	
8.17	Caribou Mitigation and Monitoring Plan	12-08-2021	03-01-2022	N/A[3]	
8.18	Caribou Mitigation and Monitoring Plan	12-08-2021	03-01-2022	N/A[3]	
8.19	Whitebark Pine Management Plan	18-02-2022	23-02-2022 07-03-2022	N/A[3]	
8.20	Whitebark Pine Management Plan	18-02-2022	23-02-2022 07-03-2022	N/A[3]	
8.21	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	
8.22	Wildlife Mitigation and Management Plan	09-12-2021	19-01-2022[2]	N/A[3]	
10.2	Accidents and Malfunctions Admin and Communications Plan	04-01-2022	19-01-2022	N/A[3]	
10.3	Accidents and Malfunctions Admin and Communications Plan	04-01-2022	19-01-2022	N/A[3]	
10.5	Accidents and Malfunctions Admin and Communications Plan	04-01-2022	19-01-2022	N/A[3]	

[1] BW Gold received notice from STN on December 10, 2021 that they do not intend to comment on the Plans at this time as it is practically impossible and financially prohibitive considering the number of Plans to review. STN stated that they would let BW Gold know when they are ready and able to re-engage.

[2] On December 15, 2021, in response to the above noted communication, BW Gold provided a two-week extension for review of these Plans. This extension is reflected in the noted date.

[3] No comments received as part of the DS consultation process.

[4] This was consulted on as part of the phase 2 Final Transmission line routing plan.

(e) Tŝilhqot'in Nation

Condition	Plan Name	Date Plan Sent to Nations	Date Comments Requested from Nations	Date Comments Received	Date Responses Provided to Nations
3.1	Surface Erosion Prevention and Sediment Control Plan	04-01-2022	N/A[1]		
	Construction Environmental Management Plan	09-12-2021	N/A[1]		
3.2	Construction Environmental Management Plan	09-12-2021	N/A[1]		
3.3	Knight Piesold - FWSS Design Report	05-01-2022	N/A[1]		
3.11	Fish Offsetting Plan	09-12-2021	N/A[1]		
	Schedule 2 HADD Compensation and Offsetting Plan				
3.12	Fish Offsetting Plan	09-12-2021	N/A[1]		
	Schedule 2 HADD Compensation and Offsetting Plan				
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	04-01-2022	N/A[1]		
3.15	Aquatic Effects Monitoring Plan	04-01-2022	N/A[1]		
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	14-01-2022	N/A[1]		
4.2	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
4.3	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
4.5	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
5.3	Wetlands Management Offsetting Plan	06-12-2021	N/A[1]		
5.4	Wetlands Management Offsetting Plan	06-12-2021	N/A[1]		
5.5	Wetlands Management Offsetting Plan	06-12-2021	N/A[1]		
6.3	Community Effects Monitoring and Management Plan	09-12-2021	N/A[1]		
	Air Quality and Fugitive Dust Management Plan	09-12-2021	N/A[1]		
	Noise and Vibration Management Plan	09-12-2021	N/A[1]		
6.5	Country Foods Monitoring Plan	20-12-2021	N/A[1]		
6.8	Invasive Plant Management Plan	09-12-2021	N/A[1]		
6.9	Final Transmission Line Routing Plan[3]	15-10-2022	28-10-2022	N/A[1]	
6.11	Country Foods Monitoring Plan	20-12-2021	N/A[1]		
6.12	Country Foods Monitoring Plan	20-12-2021	N/A[1]		
	Air Quality and Fugitive Dust Management Plan	04-01-2022	N/A[1]		
6.13	Appendix to Country Foods Monitoring Plan	31-01-2022	15-02-2022	N/A[2]	
6.14	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
	Country Foods Monitoring Plan	20-12-2021	N/A[1]		

6.15	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
7.1	Cultural and Spiritual Resources Management Plan	06-12-2021	N/A[1]		
7.2	Cultural and Spiritual Resources Management Plan	06-12-2021	N/A[1]		
8.2	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.4	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.6	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.9	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
	Caribou Mitigation and Monitoring Plan	12-08-2021	03-01-2022	30-06-2022	15-01-2022 04-07-2022
8.10	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.14	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.16	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.17	Caribou Mitigation and Monitoring Plan	12-08-2021	03-01-2022	30-06-2022	15-01-2022 04-07-2022
8.18	Caribou Mitigation and Monitoring Plan	12-08-2021	03-01-2022	30-06-2022	15-01-2022 04-07-2022
8.19	Whitebark Pine Management Plan	18-02-2022	N/A[1]		
8.20	Whitebark Pine Management Plan	18-02-2022	N/A[1]		
8.21	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
8.22	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[2]	
10.2	Accidents and Malfunctions Admin and Communications Plan	04-01-2022	N/A[1]		
10.3	Accidents and Malfunctions Admin and Communications Plan	04-01-2022	N/A[1]		
10.5	Accidents and Malfunctions Admin and Communications Plan	04-01-2022	N/A[1]		

[1] Tŝilhqot'in Nation stated they only wish to be engaged on the conditions within the Caribou Mitigation and Monitoring Plan and the Wildlife Mitigation and Management Plan, as such comments have not been requested on these Plans and responses are not anticipated.

[2] No comments received as part of the DS consultation process.

[3] This was consulted on as part of the phase 2 Final Transmission line routing plan.

(f) Métis Nation British Columbia

Condition	Plan Name	Date Plan Sent to Nations	Date Comments Requested from Nations	Date Comments Received	Date Responses Provided to Nations
3.1	Surface Erosion Prevention and Sediment Control Plan	04-01-2022	29-07-2022	N/A[1]	
	Construction Environmental Management Plan	09-12-2021	24-12-2021	N/A[1]	
3.2	Construction Environmental Management Plan	09-12-2021	24-12-2021	N/A[1]	
3.3	Knight Piesold - FWSS Design Report	05-01-2022	20-01-2022	N/A[1]	
3.11	Fish Offsetting Plan	09-12-2021	24-12-2021	N/A[1]	
	Schedule 2 HADD Compensation and Offsetting Plan				
3.12	Fish Offsetting Plan	24-12-2021	24-12-2021	N/A[1]	
	Schedule 2 HADD Compensation and Offsetting Plan				
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	04-01-2022	17-01-2022	N/A[1]	
3.15	Aquatic Effects Monitoring Plan	04-01-2022	19-01-2022	N/A[1]	
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	14-01-2022	31-01-2022	N/A[1]	
4.2	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
4.3	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
4.5	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
5.3	Wetlands Management Offsetting Plan	07-12-2021	22-12-2021	N/A[1]	
5.4	Wetlands Management Offsetting Plan	07-12-2021	22-12-2021	N/A[1]	
5.5	Wetlands Management Offsetting Plan	07-12-2021	22-12-2021	N/A[1]	
6.3	Community Effects Monitoring and Management Plan	09-12-2021	24-12-2022	N/A[1]	
	Air Quality and Fugitive Dust Management Plan	09-12-2021	24-12-2022	N/A[1]	
	Noise and Vibration Management Plan	09-12-2021	24-12-2022	N/A[1]	
6.5	Country Foods Monitoring Plan	20-12-2021	18-02-2022 07-03-2022	N/A[1]	
6.8	Invasive Plant Management Plan	09-12-2021	24-12-2021	N/A[1]	
6.9	Final Transmission Line Routing Plan[2]	15-10-2022	28-10-2022	N/A[1]	
6.11	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	
6.12	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	
	Air Quality and Fugitive Dust Management Plan	04-01-2022	19-01-2022	N/A[1]	
6.13	Appendix to Country Foods Monitoring Plan	31-01-2022	15-02-2022 07-03-2022	N/A[1]	
6.14	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	

6.15	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	
	Wildlife Mitigation and Management Plan	09-12-2021	18-01-2022	N/A[1]	
7.1	Cultural and Spiritual Resources Management Plan	07-12-2021	07-03-2022	N/A[1]	
7.2	Cultural and Spiritual Resources Management Plan	07-12-2021	07-03-2022	N/A[1]	
8.2	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.4	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.6	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.9	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[1]	
8.10	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.14	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.16	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.17	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[1]	
8.18	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[1]	
8.19	Whitebark Pine Management Plan	18-02-2022	23-02-2022	N/A[1]	
8.20	Whitebark Pine Management Plan	18-02-2022	23-02-2022	N/A[1]	
8.21	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.22	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
10.2	Accidents and Malfunctions Admin and Communications Plan	29-12-2021	01-04-2022	N/A[1]	
10.3	Accidents and Malfunctions Admin and Communications Plan	29-12-2021	01-04-2022	N/A[1]	
10.5	Accidents and Malfunctions Admin and Communications Plan	29-12-2021	01-04-2022	N/A[1]	

[1] No comments received as part of the DS consultation process.

[2] This was consulted on as part of the phase 2 Final Transmission line routing plan.

(g) Nee-Tahi-Buhn Band

Condition	Plan Name	Date Plan Sent to Nations	Date Comments Requested from Nations	Date Comments Received	Date Responses to be Provided to Nations
3.1	Surface Erosion Prevention and Sediment Control Plan	04-01-2022	19-01-2022	N/A[1]	
	Construction Environmental Management Plan	09-12-2021	24-12-2021	N/A[1]	
3.2	Construction Environmental Management Plan	09-12-2021	24-12-2021	N/A[1]	
3.3	Knight Piesold - FWSS Design Report	05-01-2022	20-01-2022	N/A[1]	
3.11	Fish Offsetting Plan	09-12-2021	24-12-2021	N/A[1]	
	Schedule 2 HADD Compensation and Offsetting Plan				
3.12	Fish Offsetting Plan	09-12-2021	24-12-2021	N/A[1]	
	Schedule 2 HADD Compensation and Offsetting Plan				
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	04-01-2022	17-01-2022	N/A[1]	
3.15	Aquatic Effects Monitoring Plan	04-01-2022	19-01-2022	N/A[1]	
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	14-01-2022	31-01-2022	N/A[1]	
4.2	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
4.3	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
4.5	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
5.3	Wetlands Management Offsetting Plan	07-12-2021	22-12-2021	N/A[1]	
5.4	Wetlands Management Offsetting Plan	07-12-2021	22-12-2021	N/A[1]	
5.5	Wetlands Management Offsetting Plan	07-12-2021	22-12-2021	N/A[1]	
6.3	Community Effects Monitoring and Management Plan	09-12-2021	24-12-2022	N/A[1]	
	Air Quality and Fugitive Dust Management Plan	09-12-2021	24-12-2022	N/A[1]	
	Noise and Vibration Management Plan	09-12-2021	24-12-2022	N/A[1]	
6.5	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	
6.8	Invasive Plant Management Plan	09-12-2021	24-12-2021	N/A[1]	
6.9	Final Transmission Line Routing Plan[2]	15-10-2022	28-10-2022	N/A[1]	
6.11	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	
6.12	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	
	Air Quality and Fugitive Dust Management Plan	04-01-2022	19-01-2022	N/A[1]	
6.13	Appendix to Country Foods Monitoring Plan	31-01-2022	15-02-2022	N/A[1]	
6.14	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
	Country Foods Monitoring Plan	20-12-2021	17-01-2022	N/A[1]	

6.15	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
7.1	Cultural and Spiritual Resources Management Plan	07-12-2020	07-01-2022	N/A[1]	
7.2	Cultural and Spiritual Resources Management Plan	07-12-2021	07-01-2022	N/A[1]	
8.2	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.4	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.6	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.9	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[1]	
8.10	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.14	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.16	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.17	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[1]	
8.18	Caribou Mitigation and Monitoring Plan	20-12-2021	21-01-2022	N/A[1]	
8.19	Whitebark Pine Management Plan	18-02-2022	23-02-2022	N/A[1]	
8.20	Whitebark Pine Management Plan	18-02-2022	23-02-2022	N/A[1]	
8.21	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
8.22	Wildlife Mitigation and Management Plan	09-12-2021	08-01-2022	N/A[1]	
10.2	Accidents and Malfunctions Admin and Communications Plan	29-12-2021	01-04-2022	N/A[1]	
10.3	Accidents and Malfunctions Admin and Communications Plan	29-12-2021	01-04-2022	N/A[1]	
10.5	Accidents and Malfunctions Admin and Communications Plan	29-12-2021	01-04-2022	N/A[1]	

[1] No comments received as part of the DS consultation process.

[2] This was consulted on as part of the phase 2 Final Transmission line routing plan.

Schedule "C"

Submission Schedule to Regulators

(a) Fisheries and Oceans Canada

Condition	Plan Name	Date Plan Sent to Regulators	Date Comments Requested from Regulators	Date Comments Received	Date Responses to be Provided to Regulators
3.2	Construction Environmental Management Plan	24-03-2022	07-04-2022	NA[3]	
3.11	Fish Offsetting Plan	03-12-2021	NA[1]	24-01-2022	30-05-2022
	Schedule 2 HADD Compensation and Offsetting Plan	23-02-2021 20-04-2022 11-01-2023	NA[1/2]	12-05-2021 20-06-2022 10-11-2022 25-01-2023	20-04-2022 13-09-2022 11-01-2023
3.12	Fish Offsetting Plan	03-12-2021	NA[1]	24-01-2022	30-05-2022
	Schedule 2 HADD Compensation and Offsetting Plan	23-02-2021 20-04-2022 11-01-2023	NA[1/2]	12-05-2021 20-06-2022 10-11-2022 25-01-2023	20-04-2022 13-09-2022 11-01-2023
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	25-02-2022	10-03-2022	NA[3]	
3.15	Aquatic Effects Monitoring Plan	25-02-2022	10-03-2022	NA[3]	
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	25-02-2022	10-03-2022	NA[3]	

[1] Submitted to regulatory process with its own timelines.

[2] BW Gold submitted the plan directly to ECCC who sought advice from DFO.

[3] No comments received from DFO.

(b) Environment and Climate Change Canada

Condition	Plan Name	Date Plan Sent to Regulators	Date Comments Requested from Regulators	Date Comments Received	Date Responses to be Provided to Regulators
3.11	Schedule 2 HADD Compensation and Offsetting Plan	25-03-2022 20-04-2022	NA[1/2]	NA[3]	20-04-2022 13-09-2022
3.12	Schedule 2 HADD Compensation and Offsetting Plan	25-03-2022 20-04-2022	NA[1/2]	NA[3]	20-04-2022 13-09-2022
4.3	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
4.5	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
5.3	Wetlands Management Offsetting Plan	01-10-2021 05-11-2021 10-09-2022	29-10-2021	04-11-2021 05-11-2021 09-03-2022	16-03-2022
5.4	Wetlands Management Offsetting Plan	01-10-2021 05-11-2021 10-09-2022	29-10-2021	04-11-2021 05-11-2021 09-03-2022	16-03-2022
5.5	Wetlands Management Offsetting Plan	01-10-2021 05-11-2021 10-09-2022	29-10-2021	04-11-2021 05-11-2021 09-03-2022	16-03-2022
6.14	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
6.15	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
8.2	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
8.4	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022

8.6	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
8.9	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
	Caribou Mitigation and Monitoring Plan	12-08-2021 31-12-2021 15-03-2022	20-10-2021	05-11-2021 30-11-2021 28-01-2022 10-01-2022 28-01-2022 07-02-2022 02-03-2022	16-12-2021 10-01-2022 21-03-2022
8.10	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
8.14	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
8.16	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
8.17	Caribou Mitigation and Monitoring Plan	12-08-2021 31-12-2021 15-03-2022	20-10-2021	05-11-2021 30-11-2021 28-01-2022 10-01-2022 28-01-2022 07-02-2022 02-03-2022	16-12-2021 10-01-2022 21-03-2022
8.18	Caribou Mitigation and Monitoring Plan	12-08-2021 31-12-2021 15-03-2022	20-10-2021	05-11-2021 30-11-2021 28-01-2022 10-01-2022 28-01-2022 07-02-2022 02-03-2022	16-12-2021 10-01-2022 21-03-2022

8.19	Whitebark Pine Management Plan	08-03-2022 20-09-2022	22-03-2022	26-04-2022	20-09-2022
8.20	Whitebark Pine Management Plan	08-03-2022 20-09-2022	22-03-2022	26-04-2022	20-09-2022
8.21	Wildlife Mitigation and Management Plan	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[4]	18-11-2021 28-02-2022 13-05-2022	30-12-2021 24-01-2022 06-04-2022 22-07-2022 07-09-2022
10.2	Accidents and Malfunctions Admin and Communications Plan	06-04-2022 10-09-2022	20-04-2022	20-04-2022	NA[5]
10.3	Accidents and Malfunctions Admin and Communications Plan	06-04-2022 10-09-2022	20-04-2022	20-04-2022	NA[5]

[1] Submitted to regulatory process with its own timelines.

[2] BW Gold submitted the plan directly to ECCC who sought advice from DFO.

[3] No comments received from ECCC.

[4] Plan was provided 60 days prior to the start of construction as required by provincial EAC.

[5] Nothing to respond to with ECCC based on their letter.

(c) FLNRORD

Condition	**Plan Name**	**Date Plan Sent to Regulators**	**Date Comments Requested from Regulators**	**Date Comments Received**	**Date Responses Provided to Regulators**
3.2	Construction Environmental Management Plan[2]	12-10-2021 01-12-2021 01-04-2022 24-03-2022 16-03-2023	29-10-2021 30-03-2023	03-11-2021 23-03-2023	29-12-2021 01-04-2022 24-05-2022 26-04-2023
4.3	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
4.5	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
5.3	Wetlands Management Offsetting Plan	12-10-2021 16-12-2022	29-10-2021	04-11-2021 15-12-2021	16-12-2022
5.4	Wetlands Management Offsetting Plan	12-10-2021	29-10-2021	04-11-2021	16-12-2022

		16-12-2022		15-12-2021	
5.5	Wetlands Management Offsetting Plan	12-10-2021 16-12-2022	29-10-2021	04-11-2021 15-12-2021	16-12-2022
6.14	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
6.15	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.2	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.4	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.6	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.9	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
	Caribou Mitigation and Monitoring Plan[2]	12-08-2021 31-12-2021 15-03-2022	20-10-2021	05-11-2021	21-03-2022
8.10	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.11	Wildlife Mitigation and Management Plan[2]	10-09-2022	NA	NA	NA
8.14	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.16	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022
8.17	Caribou Mitigation and Monitoring Plan[2]	12-08-2021 31-12-2021	20-10-2021	05-11-2021	21-03-2022

		15-03-2022			
8.18	Caribou Mitigation and Monitoring Plan[2]	12-08-2021 31-12-2021 15-03-2022	20-10-2021	05-11-2021	21-03-2022
8.19	Whitebark Pine Management Plan	23-02-2022 20-09-2022	07-03-2022	29-03-2022	20-09-2022
8.20	Whitebark Pine Management Plan	23-02-2022 20-09-2022	07-03-2022	29-03-2022	20-09-2022
8.21	Wildlife Mitigation and Management Plan[2]	11-08-2021 30-12-2021 06-04-2022 16-07-2022	NA[1]	21-10-2021	30-12-2021 24-01-2022 06-04-2022 22-07-2022

[1] Plan was provided 60 days prior to the start of construction as required by provincial EAC.

[2] This plan was also submitted for consultation as part of the Joint *Mines Act/Environmental Management Act* Application process that is described in section 3.0 of this memo.

(d) Northern Health

Condition	**Plan Name**	**Date Plan Sent to Regulators**	**Date Comments Requested from Regulators**	**Date Comments Received**	**Date Responses to be Provided to Regulators**
6.11	Country Foods Monitoring Plan	20-12-2021 28-07-2022	NA[1]	28-01-2022	20-12-2021 28-07-2022
6.12	Country Foods Monitoring Plan	20-12-2021 28-07-2022	NA[1]	28-01-2022	20-12-2021 28-07-2022
	Air Quality and Fugitive Dust Management Plan[2]	30-09-2021	20-04-2022	21-04-2022	28-07-2022
6.15	Country Foods Monitoring Plan	20-12-2021 28-07-2022	NA[1]	28-01-2022	20-12-2021 28-07-2022

[1] Plan was provided 60 days prior to the start of construction as required by provincial EAC.

[2] This plan was also submitted for consultation as part of the Joint *Mines Act/Environmental Management Act* Application process that is described in section 3.0 of this memo.

(e) Health Canada

Condition	**Plan Name**	**Date Plan Sent to Regulators**	**Date Comments Requested from Regulators**	**Date Comments Received**	**Date Responses to be Provided to Regulators**

6.11	Country Foods Monitoring Plan	03-12-2021 21-04-2022 28-07-2022	17-12-2021	21-04-2022	28-07-2022
6.12	Country Foods Monitoring Plan	03-12-2021 04-04-2022 28-07-2022	20-04-2022	21-04-2022	28-07-2022
	Air Quality and Fugitive Dust Management Plan	04-04-2022	20-04-2022	21-04-2022	28-07-2022
6.13	Appendix to Country Foods Monitoring Plan	23-08-2022	09-09-2022	NA[1]	NA[1]
6.15	Country Foods Monitoring Plan	03-12-2021 21-04-2022 28-07-2022	17-12-2021	21-04-2022	28-07-2022

[1] No comments received from Health Canada.

(f) ENV

Condition	Plan Name	Date Plan Sent to Regulators	Date Comments Requested from Regulators	Date Comments Received	Date Responses to be Provided to Regulators
3.14	Aquatic Effects Monitoring Plan – Follow-up Program	25-02-2022	10-03-2022	NA[1]	NA[1]
3.15	Aquatic Effects Monitoring Plan	25-02-2022	10-03-2022	NA[1]	NA[1]
3.16	Aquatic Effects Monitoring Plan – Follow-up Program	25-02-2022	10-03-2022	NA[1]	NA[1]

[1] No comments received from ENV.

(g) IAAC

Condition	Date Plan Sent to Regulators	Date Comments Requested from Regulators	Date Comments Received	Date Responses to be Provided to Regulators
9.3[1]	22-03-2022	NA[1]	28-03-2022	NA[1]

[1] Simple email exchange between BW gold and IAAC on frequency of reporting.

Exhibit 1
Joint Mines Act/Environmental Management Act (ITT)

Comment ID	Section	Topic	Comment Author	Comment Response Author	Date Comment Received	Review Phase	New or Follow Up to Previous Comment?	Comment Type	Potential Permit Condition?	Comment	Proponent Response									
Unique identifying ID to keep track of comments	*Section of application or supporting document*	*Theme of comment*	*Reviewer's name and/or organization*	*Name and/or organization*	*Date comment provided from reviewer*	*Round of review (1,2,3)*	*New/Follow Up*	*Information requirement, clarification, question, or comment*	*Yes/No*	*Reviewer's comment*	*Proponent's response*	nd 1 (LDN-I	hent Author (Cle	Primary Consultant (Cleaned)	Supporting Consultant (Cleaned)	Responsible Person	Client Point Rep	Comment Due Date to BWG	BW Review (Initials; Date)	Ready for Publishing
1	Technical Assessment Memo Table 2-1 Design Basis	MWR	BC ENV (Breanne Hill)		Jun 01, 2022	1	New		No	The effluent classification in Table 2-1 Design Basis indicates an effluent of Class B. However, the TSS and BOD levels in that table do not match the requirements for Class B effluent. Please confirm the effluent classification and the plant effluent criteria.	Please see attachment "R1_BC ENV_Comment ID 1.pdf"		BC ENV (Breanne Hill)	WSP		Eric P	GM	Ready for Submission	GM; June 16	Ready for Publishing
2	Technical Assessment Memo Comment 102	MWR	BC ENV (Breanne Hill)		Jun 01, 2022	1	New		No	Comment 102 indicates that the lift station will be equipped with two pumps. Please outline where all pumps are needed in the system (including for dewatering) and indicate if there is redundancy for each of those pumps. Discuss the peak flow rate for the camp and if the pumps are capable of pumping peak flow design flows. Discuss if standby power is available.	Please see attachment "R1_BC ENV_Comment ID 2, 3, 4.pdf"		BC ENV (Breanne Hill)	WSP		Eric P	GM	Ready for Submission	RT: June 28	Ready for Publishing
3	Technical Assessment Memo	MWR	BC ENV (Breanne Hill)		Jun 01, 2022	1	New		No	Discuss why no disinfection is required.	Please see attachment "R1_BC ENV_Comment ID 2, 3, 4.pdf"		BC ENV (Breanne Hill)	WSP		Eric P	GM	Ready for Submission	RT: June 28	Ready for Publishing
4	Technical Assessment Memo Comment 103	MWR	BC ENV (Breanne Hill)		Jun 01, 2022	1	New		No	Discuss what happens to the chemicals that are added to the camp sewage system. The response to Comment 103 only discusses what happens to the sewage that is deposited in the TSF.	Please see attachment "R1_BC ENV_Comment ID 2, 3, 4.pdf"		BC ENV (Breanne Hill)	WSP		Eric P	GM	Ready for Submission	RT: June 28	Ready for Publishing
5	Operating Plan	MWR	BC ENV (Breanne Hill)		Jul 22, 2022	2	Follow Up		No	Please ensure that the operating plan is up to date and discusses the operation of the proposed plant. Ensure that the operating plan includes all the applicable requirements outlined in Division 4 of the MWR. If BWG deems that any of the requirements are not applicable please include a short memo that outlines the reasoning for that decision.	Please see attachment "R2_ENV Comment ID 5.pdf"		BC ENV (Breanne Hill)	WSP		Eric P	GM	Ready for Submission	GM; August 10	Ready for Publishing
5	Operating Plan	MWR	BC ENV (Breanne Hill)		Jun 01, 2022	1	New		No	Provide ENV with an updated operating plan that is specific to the new treatment system. The updated operating plan is required prior to decision on the new MWR registration.	BW Gold understands this is required prior to a decision, and targets submission of the updated plan before the end of the Round 2 response period.		BC ENV (Breanne Hill)	WSP		Eric P	GM	Ready for Submission	GM; June 16	Ready for Publishing
6	Appendix 9-O TBD	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	I recommend noting extra dust control measures and performance monitoring on the FSR and MAR sections near Tatelkuz Lake 28 / Resort.	The AQDMP will be updated to include specific mention of dust control and visual monitoring near Tatelkuz Lake 28/Resort. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing
7	Appendix 9-O page 8-1 Table 8.2-1	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Under 'Production blasting', 'check weather conditions' and 'until weather conditions improve': please include additional details in the document to briefly define the parameters of such weather conditions. Under 'Low Grade Ore Stockpile': please provide reference/justification for the definition of a hot and dry day (also in Appendix D, Section 4)	AQDMP will be updated to : Where dust or fume impacts on employees and environment cannot be avoided, blasting must be postponed until wind direction does not disperse emissions towards employees or local sensitive receptors. The Mine Drill and Blast Superintendent and Mine manager will ultimately decide when to postpone blasting (the EM and Health and Safety can inform this decision)		BC ENV (Tarek Ayache)	ERM		Andres	AT	Ready for Submission	AT, June 25	Ready for Publishing
8	Appendix 9-O section 8.3	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		Yes	1st paragraph: whereas it is stated that 'air quality monitoring program will be initiated prior to the start of construction', no timeline is specified. To the extent possible, it is highly recommended that such monitoring program be initiated at least 1 year prior to construction to obtain adequate baseline data.	AQ monitoring will begin in fall 2022 with a Thermo Scientific Partisol unit being used to capture PM2.5 and PM10. BW Gold will also be using a radiello device to collect passive NO2 and SO2 AQ samples. The filters are deployed for 30 days and then sent to an accredited lab for analysis. As part of the Country Foods Monitoring Program, dustfall containers will also be installed at various locations in 2022 to collect additional baseline information.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	TD, Jun 27	Ready for Publishing
9	Appendix 9-O sections 8.3.3 and 8.3.4	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Whereas two air quality monitoring sites are identified in Figure 8.3-1, references are made only to the camp site(s) (exploration and operations). Please revise to include the other monitoring site near Tatelkuz Lake 28 / Resort.	There is no plan to add in AQ monitoring at Tatelkuz Lake, the Figure (8.3-1) will be updated to represent this on future versions of the AQDMP.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT: June 25	Ready for Publishing
9	Appendix 9-O sections 8.3.3 and 8.3.4	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	Given the relatively small concentrations predicted by modelling at that site, I understand this feedback. That being said, in addition to the extra dust control and monitoring measures noted in comment #6, I believe that the management plans need to emphasize absolute readiness to deploy additional AQ monitoring to Tatelkuz Lake 28 / Resort, in the event there are any indications of dust impacts at that	A dustfall station has been set up this summer at Tatelkuz Lake that will provide data on dustfall and metals. This location will be added to Fig 8.3-1. If air quality monitoring at other locations indicates that additional monitoring at Tatelkuz Lake is required BW Gold will repond quickly by deploying appropriate instrumentation in accordance with the Air Quality and Dust Management Plan.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT/ Aug. 7	Ready for Publishing
10	Appendix 9-O section 8.3.3	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Please provide justification for the change in PM2.5/PM10 alternation schedule, from every other 3rd day May-Oct to weekly Nov-April	During Nov - Apr, due to snow cover, it is anticipated that fugitive emissions will decrease significantly and therefore a less frequent sampling schedule will be sufficient to characterize PM concentrations onsite.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing
10	Appendix 9-O section 8.3.3	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up		No	Whereas I understand and agree with this justification, Nov-Apr sampling frequency needs to be every 1 in 6 days to ensure adequate representation (as opposed to fixed weekly schedule)	The AQDMP will be updated to indicate a six day schedule. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing

11	Appendix 9-O section 8.3.6	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	For point source monitoring, it is stated that 'sampling and analysis must be conducted once every five years'. Such a period is fairly long, please provide justification. Shorter sampling periods are typically recommended during the initial project phases to ensure proper operations of pollution control equipment, which may then be extended to longer sampling periods.	The sampling and analysis will be conducted after the first year of operation and every five years after that, unless sampling indicates higher frequency is needed. With new equipment onsite, it is expected that this level of frequency will be sufficient for determining if emissions exceed permitted rates.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing
12	Appendix 9-O page 8-8 Table 8.3-2	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	For the Fire Assay Main Lab and Propane smelting furnace, only Total Particulate Matter is listed as a parameter for monitoring. Please provide justification for not including other gaseous parameters, such as SO2.	The amount of other gaseous parameters, such as SO2, that would be emitted by fire assaying ore would be insignificant. BW Gold has refined the project design and now intends to use an electric smelting furnace, eliminating the need for the propane smelting furnace. This makes the air emissions assessment conservative. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 20	Ready for Publishing
13	Appendix 9-O section 8.3.7	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	'Duplicate dustfall metals samples collected at each dustfall monitoring site': In section 8.3.2, it is stated that dustfall monitoring will not be conducted. Please explain or revise this discrepancy.	Earlier versions of the AQMP included dustfall monitoring, as this type of monitoring is required under the Country Foods Monitoring Program (EAC Condition 41); it was included in both plans for consistency. However, because dustfall monitoring is no longer recommended for routine air quality monitoring (EMPR/ENV 2018), this monitoring was removed from the AQMP and included only in the CFMP. This in-text reference in the AQMP to "duplicate dustfall metals samples collected at each dustfall monitoring site" will be removed from the final version of the AQMP, as it was a remnant of text that has otherwise been removed.		BC ENV (Tarek Ayache)	ERM	Entia	Andres/Leslie y	RT	Ready for Submission	TD, 15-Jun	Ready for Publishing
14	Appendix 9-O section 9.1 page 9-2	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	2nd paragraph, 'measurements at the operations camp': please include the Tatelkuz Lake site as per my previous comment. 4th paragraph, 'the frequency of elevated 24-hour fine PM concentrations and the rolling average of fine PM concentrations will be tracked and evaluated': - if PM is to include PM2.5 and PM10, please remove 'fine' here and thereafter, as fine would refer to PM2.5 only (PM10 is referred to as coarse PM)	Monitoring will not occur at Tatelkuz Lake, it will only at the operations camp. The 4th paragraph will be updated to state "PM2.5 and PM10" instead of "fine PM". The analysis to develop a causal relationship between PM and operations/external factors will be conducted as part of annual reporting. This will be more explicitly stated in the updated AQDMP. The term "analysis of trends" will be substituted for rolling average in future versions of the AQDMP		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing
15	Appendix 9-O Table 9.1-1	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Location: - the Tatelkuz Lake site is not included. Trigger - in reference to PM, SO2 & NO2: - Instead of 'Baseline Case', baseline concentrations obtained at the specific locations prior to the project's onset would be a better reference - should location-specific baseline concentrations be obtained from monitoring, including predicted concentrations cannot be reasonably justified given their inherently high uncertainties. Only references to baseline concentrations and Ambient Air Quality Objectives would suffice and are adequate. Fine PM: - remove 'Fine' as per previous comment - in addition to annual average PM10 and PM2.5 concentrations, please add reference to daily average	Monitoring will not occur at Tatelkuz Lake only at the operations camp. References to "Baseline Case" cannot be changed to "baseline concentrations at the monitoring station prior to construction" because pre-construction monitoring is not possible. Predicted concentrations will be used because pre-construction monitoring will not be possible as the start of construction is imminent. "Fine" will be removed in future versions of the AQDMP. The 24-hour CAAQS for PM2.5, NO2 and SO2 cannot be compared against monitoring data until 3 years of data have been collected so at this point including references to these AQO is not appropriate. In addition, PASS monitoring which provides monthly average concentrations for NO2 and SO2 cannot be used to compare against 24-hour AQO. The modelling of SO2 and NO2 does not suggest that exceedances of the 24-hour objectives will occur at sensitive receptors therefore the longer averaging period of the PASS		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT: June 25	Ready for Publishing
15	Appendix 9-O Table 9.1-1	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up		No	Understanding the provided justification, I am still concerned about using predicted concentrations given their inherently high uncertainties. Moreover, baseline concentrations used in the application's assessment are almost 10 years old (2013), and I'm concerned about their representativeness of present conditions. Would it be possible to consider a baseline monitoring site that is little affected by construction activities? Could the Tatelkuz Lake 28/Resort site be an option? Perhaps this critical matter can be resolved through discussions with Ministry staff. 24-hr PM2.5 data can be compared against BC AQOs (not CAAQS) on an individual and an annual basis. Please revise accordingly.	Based on discussions with BC ENV on August 11th, the AQDMP will be updated to remove comparison to predicted concentrations in the TARP (Table 9.1-1). Rather, monitored results will be compared to baseline concentrations and fractions of the applicable air quality objective. The None trigger will be: Less than 50% of the annual PM10 or PM2.5 AQO The Low trigger will be: greater than 50% of the annual PM10 or PM2.5 AQO The Medium trigger will be: greater than 80% of the annual PM10 or PM2.5 AQO The High trigger will be: greater than the annual PM10 or PM2.5 AQO Similar changes will also be applied to SO2 and NO2 triggers. No further baseline monitoring is required.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	TD, Aug 11	Ready for Publishing
16	Appendix 9-O page 9-7	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	1st & 2nd paragraphs: - what is the justification for '3-month rolling average PM2.5 concentration', especially based on non-continuous data? - 'elevated 24-hour fine PM concentrations': relative to what? Baseline, exceedances? - 'dust management monitoring': is that a typo? - 'compare measurements to predictions from the effects assessment': revise reference to 'predictions' as per my previous comment. - 'If there is an air quality advisory issued ... the EM will determine': how will such determination be made?	A rolling average does not require continuous data, see discussion in Comment #14. The three-month period was chosen so that analysis could occur as data became available and not wait until annual reporting. "Elevated" will be based on the numerical value of the 24-hour standards. The word "monitoring" will be removed from "dust management monitoring". Measurements cannot be compared to pre-construction monitoring, because the start of construction is imminent. The determination will be made based on consultation with an air quality QP. The AQDMP text will be updated to reflect this change in future versions of the AQDMP		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing

16	Appendix 9-O page 9-7	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up		No	Baseline concentrations, as per previous comment.	Based on discussions with BC ENV on Aug 11 no further baseline monitoring is required.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	TD, Aug 11	Ready for Publishing
17	Appendix 9-O section 9.2	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	1st paragraph, 'The predicted concentrations are considered to be baseline concentrations for the purposes of the FUP': measured baseline concentrations instead of predicted concentrations, as per my previous comment.	Measured pre-construction monitoring concentrations will not be possible to use, because the start of construction is imminent. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing
17	Appendix 9-O section 9.2	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up		No	Baseline concentrations, as per previous comment.	Based on discussions with BC ENV on August 11 no further baseline monitoring is required.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	TD, Aug 11	Ready for Publishing
18	Chapter 5 Section 5.2.2.4	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	For the incinerator please provide the following information: a.How many chambers are in the incinerator, b.The residence time and temperature in the secondary chamber, if it is present, c.The temperature in the primary chamber, and d.The oxygen concentration in the incinerator.	a. two chambers b. the secondary chamber temperature is >875C and can reach temperatures of 1000C. Please note this is dependent on the waste stream that is being input c. The temperature in the primary chamber can be >500 C; please note this is dependent on the waste stream that is being input. d. 9.6 vol% dry air but also depends on the nature of the waste stream		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 23	Ready for Publishing
18	Chapter 5 Section 5.2.2.4	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up		No	please indicate the residence time in the secondary chamber. Please note that the secondary chamber should reach a temperature of 1000 degrees C or higher for the entire burn period to allow for adequate combustion of potential contaminants of concern.	The residence time in the secondary chamber is approximately 1 second. It is noted that the temperature should reach 1000C or higher for the duration of the burn.		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing

19	Chapter 5 Section 5.2.2.4	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	The maximum concentrations of emissions for the incinerator were calculated using AP-42. Please confirm the maximum concentration of emissions with the manufacturer.	Particulate (mg/Sm3) - 22.0 Particulate (mg/Sm3 @11% O2) - 19.1 Particulate (w/back-half @ 11% O2) - 27.0 HCl (mg/Sm3 @ 11% O2) - 1.2 SOx (mg/Sm3 @ 11% O2) - 21 NOx (mg/Sm3 @ 11% O2) - 66 CO (mg/Sm3 @ 11% O2) - 37		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 23	Ready for Publishing
20	Chapter 5 Section 5.2.2.4	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Please indicate if there is pollution control equipment on the incinerator.	No pollution control devices		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 23	Ready for Publishing
21	Chapter 5 Section 5.2.2.2	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Please discuss what contaminants may be contained in the effluent from the wet scrubbers and where the effluent is going to be discharged.	The wet scrubber is used to remove acid fumes given off by the acid digests. The liquid waste from the scrubber is very weak acid, close to pH7, and will be captured in the scrubber recycle tank. The scrubber recycle tank solution will be monitored and neutralized as needed in the tank to pH7. Neutralized scrubber recycle tank solution will be combined in the plant with mine tailings and ultimately disposed of to the TSF. Volume of neutralized scrubber recycle tank solution discharged will represent a negligible fraction of the tailings stream.		BC ENV (Tarek Ayache)	BWG		Klaus	TD	Ready for Submission	RT; June 13	Ready for Publishing
22	Chapter 5 Section 5.2.2.2	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Please indicate what actions will be taken if there is a malfunction in one of the wet scrubbers or the dust collectors.	In the event of any assay lab dust collector or scrubber malfunctioning, work will be stopped and the problem corrected.		BC ENV (Tarek Ayache)	BWG		John	TD	Ready for Submission	RT; June 13	Ready for Publishing
23	Chapter 5 Section 5.2.2.1	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Please indicate what type of pollution control equipment will be used for the carbon reactivation kiln. Please provide justification if no pollution control equipment will be used on the carbon reactivation kiln.	The regeneration kiln off-gas composition is 85.5% water vapor, 13.4% CO2, 0.17% CO, 0.125% CH4 and 9 ppm NH3, with less than 0.2% particulate matter. This is similar to the discharge from a domestic natural gas home heating furnace, except for the high water vapor content. As such, no pollution control equipment is planned or considered necessary.		BC ENV (Tarek Ayache)	BWG		John	TD	Ready for Submission	RT; June 13	Ready for Publishing
23	Chapter 5 Section 5.2.2.1	Air	BC ENV (Tarek Ayache)		Jul 22, 2022	2	Follow Up		No	The TSP concentration for the reactivation kiln is 436 mg/m3, which is very high compared to the other discharge sources. Please outline what can be done to reduce the amount of TSP discharged.	We have looked at ways to reduce TSP emissions and also reduce the use of fossil fules within the process plant in general and are now planning to install an electrically-heated reactivation kiln. The carbon reactivation kiln will now be electrically heated (external to the tube) and the off gases are only water vapor As such, TSP emissions from the EA levle modelling are a very conservative estimate. The electrically heated kiln is expected to have near zero TSP emissions.		BC ENV (Tarek Ayache)	BWG		John T	TD	Ready for Submission	TD, Aug 11	Ready for Publishing
24	Appendix 5-A Table 5.3-1	Air	BC ENV (Tarek Ayache)		Jun 01, 2022	1	New		No	Please discuss why the Tatelkuz Lake Reserve 28 was not included in the sensitive receptors.	The Tatelkuz Lake Resort and Reserve 28 are in the same location (the properties are immediately adjacent).		BC ENV (Tarek Ayache)	ERM		Andres	RT	Ready for Submission	RT; June 18	Ready for Publishing
25	Appendix 5E - SBEB Summary Figure 1-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Please confirm the location of the headwaters for Creek 661. 2. Which map or figure in the application accurately shows Creek 661 and its tributaries?	1 and 2. Figure 4.2-2b will be provided in the updated Aquatic Effects Monitoring Program Plan, Version 1.0 to show the headwaters of Creek 661 and its tributaries. The figure is provided in the memo titled: Blackwater_AEMP_Comment Responses 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, and 61		BC ENV (Andrew Foster)	ERM	KP	Tonia	RT	Ready for Submission	RT: June 28	Ready for Publishing
26	Appendix 5E - SBEB Summary Figure 1-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Based on information in the rest of the application, my understanding is WQ3 is on Creek 505659, WQ4 is on Creek 146920, and Creek 661 is located south of those tributaries; please confirm this is correct and correct the statement if needed.	BW Gold confirms that the reviewer is correct and is referred to the map provided in response to comment ID# 45 (provided in memo titled: Blackwater_AEMP_Comment Responses 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, and 61). Although the map does not include WQ4 located on Creek 146920, it does show WQ3 (as 661-05 on Creek 505659) and WQ5 (as 661-10 on Creek 661 mainstem) along with the creek names and flow directions.		BC ENV (Andrew Foster)	ERM	KP	Tonia	RT	Ready for Submission	RT: June 28	Ready for Publishing
27	Appendix 5E - SBEB Summary Figure 1-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Please provide rationale for combing WQ3 and WQ5 into one proposed SBEB value. 2. Please discuss dilution at the confluence of Creek 50569/146920; and Creek661/146920 in both proposed SBEB periods (i.e.., April-July and August-December) in your rationale. If WQ3 and WQ5 are on different waterbodies, separate SBEB values may be more appropriate.	Please see attachment "R1_ENV Comment ID 27, 84, 85, 88.pdf"and "R1_ENV Comment ID 27, 84, 85, 88.xls"		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 27	Ready for Publishing

27	Appendix 5E - SBEB Summary Figure 1-1	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	Follow Up		No	1. ENV recommends setting SBEB concentrations at set locations on watercourses that will be protective of all receptors and that those concentrations are site specific (e.g., WQ5 data used only for WQ5.) 2. ENV does not support combining WQ3/WQ5 data into a single SBEB value to apply to Creek 661 and its tributaries 3. SBEBs must be protective of the receiving environment, specifically, the most sensitive life stage of the most sensitive species present. I must assume all sensitive species are present until shown otherwise (e.g., all streams assumed to be fish bearing).The SBEB background approach is reliant on site-specific concentrations at or below the 95th percentile +20% representing a minimal difference from background concentrations within variability of laboratory replication and therefore a protective threshold. Anything above this calculated threshold and BC WQG represents concentrations where	Please refer to attachment "R2_ENV Comment ID 27_R3_ENV Comment ID 34(2), 34(10) and 2177.pdf".		BC ENV (Andrew Foster)	Lorax		Meghan		Ready for Submission	GM; Sept 20	Ready for Publishing
28	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide rationale for why water quality data from multiple stations was combined to generate the SBEB values. For example, for stations such as WQ3/WQ5 the SBEB values derived from each station are substantially different and combining the values doesn't appear to generate a suitable value for either station. On Davidson Creek WQ28 and WQ7 are nearly 10 km apart and aluminum concentrations are quite different for August 1 - December 31. ENV is interested in setting SBEBs at specific locations	This comment is acknowledged. Please refer to the response to Comment 27.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
28	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	2	Follow Up		No	Submitted with ENV Round 2b comments: Please see comment 27.	Please refer to the response to Comment 27.		BC ENV (Andrew Foster)	Lorax				Sept. 20	GM; Sept 21	Ready for Publishing
29	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Is it known where high aluminum concentrations at WQ5 from August 1- December 31 originate or the relative contributions from each source (e.g., Creek 505659)? 2. Is there any historic water quality data in Creek 661 upstream of WQ5 in Creek 661 mainstem?	1. Baseline D-Al concentrations WQ3 (on the tributary 505659 mainstem) and WQ4 (in the upper reach of tributary 146920), both of which contribute to WQ5 flow, are elevated above the BC long-term water quality guideline, including during the August to December period (see Figure 4.1-18 of Appendix 2-H, 2011 to 2020 Baseline Water Quality Report). The relative aluminum load contribution of the different Creek 661 tributaries to WQ5 is uncertain at this time. Baseline concentrations of D-Al above the BC long-term water quality were observed at water quality stations in Davidson Creek, Creek 661, Creek 705, and Turtle Creek, reflecting generally elevated Al levels in and around the Project area. 2. Historic water quality data in Creek 661 upstream of WQ5 in the Creek 661 mainstem is not available.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
30	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. How could SBEBs be adapted to changes in water quality (e.g., climate change) if unimpacted upstream locations are not available (e.g., engulfed within mine footprint)? For example if Creek 661 tributary flows naturally decline and aluminum concentrations become more concentrated is there a method or plan to adjust the SBEB if needed? 2. Is there a suitable reference stream that could be used to monitor flow declines?	1. The ENV Technical Guidance document "A Framework for the Development and Use of Freshwater Science-Based Environmental Benchmarks for Aquatic Life in Environmental Management Act Permitting for Mines" does not contain guidance on the adaptation of SBEBs in the specific event of changes to background water quality, such as effects related to climate change. BW Gold will work within the adaptive management framework presented in the SBEB application documents and the AEMP to evaluate the appropriateness of SBEBs as new scientific information and monitoring program results become available. If the need to adjust the SBEB is identified, BW Gold will work with ENV to develop an updated SBEB or an alternative framework from which to evaluate D-Al concentrations. 2. An extensive hydrological monitoring network has been established for the Project, and will continue to be monitored as the project progresses. Notably, hydrology and water quality will continue to be measured at stations established in reference streams identified in the AEMP - Turtle Creek and Creek 705 - both of which show dissolved aluminum concentrations above the BC long-term water quality guideline. Monitoring results from these stations may support the evaluation of the appropriateness of the SBEB.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
30	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. BW Gold may want to be proactive in determining a way to adjust SBEB values as upstream background sites will become engulfed by the project and a simple recalculation of background concentrations will not be possible. (Comment, no action needed) 2. It is my understanding Creek 705 is expected to see an increase flow to mine activities and therefore may not be a preferred reference site in the example scenario. (Comment, no action needed)	1. Thank you for this comment. The need to be proactive to ensure the SBEB appropriately reflects background conditions is noted. 2. Thank you for this comment. As a result of this and related comments, the AEMP wording will be adjusted to clarify that monitoring stations in Creek 705 are currently identified as reference locations but project effects to flow may result in these stations no longer being appropriate for use as reference sites. A tributary to Fawnie Creek (FC-01) and Turtle Creek (TC-01) will continue to be monitored as a reference sites. A new station in the upper Creek 661 mainstem (661-01) has also been added to the AEMP and may be used to support the evaluation of potential changes to background conditions.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; Aug 4	Ready for Publishing
31	Appendix 5E - SBEB Summary Appendix H - Water Quality predictions for Al	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Are model predictions accurate for WQCK661 and other model nodes driven by data collected during baseline sampling? 2. Is there any uncertainty associated with WQCK661 or other model node values? For example, the Al values between WQ5 and WQCK661 are nearly identical even though there appear to be substantial inputs from streams downstream of WQ5. I'm concerned the model predictions for nodes, such as WQCK661, may be misleading and potentially replicate WQ5 data.	1. All model predictions are based on empirical data, as available and as appropriate, and professional judgement. As such, model predictions represent a conservative best-estimate of future conditions at the subject property. For model nodes at which the primary loading source is background, the reviewer correctly notes that water quality predictions at these stations are driven by the node's background term, which is based on baseline water quality data (or the baseline water quality dataset for the most appropriate proxy station, if a baseline dataset is not available for a given node). 2. There is uncertainty associated with all model node values. As noted above, all model predictions are based on empirical data, as available and as appropriate, and professional judgement to generate an estimate of future conditions. Please refer to the response to Comment 32 for further detail on the information used to develop the WQ5 and WQCrk661 model nodes.		BC ENV (Andrew Foster)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing

31	Appendix 5E - SBEB Summary Appendix H - Water Quality predictions for Al	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the clarification. Comment closed.	Blackwater acknowledges that the comment is closed.		BC ENV (Andrew Foster)	Lorax				Ready for Submission	GM; July 29	Ready for Publishing
32	Appendix 5E - SBEB Summary Appendix H - Water Quality predictions for Al	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide additional explanation how these nodes were generated using WQCK661 as an example and discuss confidence in WQCK661 data predictions. Is WQCK661 robustly characterized by the model?	The following bullet points discuss relevant data, assumptions and uncertainties regarding the WQCK661 node: •WQCK661 (Creek 661 above confluence with Chedakuz Creek) is an ~58 km2 drainage basin. Further upstream is the WQ5 node (drainage area ~25 km2). Approximately 43% of the total flow reporting to WQCK661 is generated within the WQ5 catchment. •Contact groundwater volumes are predicted by the WBM to report to two headwater tributaries in the Creek 661 basin: H1 catchment (9 km2) and H11 catchment (15 km2). •A short distance downstream of the H1 and H11 confluence (~100 m) is the WQ5 surface water quality sampling station and model node. •The H1 hydrometric gauge was installed in May 2011 and remains active. Rating curve data and computed discharge data for the station through 2020 is summarized in the baseline hydrology report that accompanied Section 2 (Existing Conditions) of the Application. •The H11 hydrometric gauge was installed in May 2013 and remains active. Rating curve data and computed discharge data for the station through 2020 is also summarized in the baseline hydrology report that accompanied the Application. •The sum of flow at the H1 and H11 gauges roughly approximates the flow at the WQ5 node. •Using the wealth of hydrometric data collected at the mine site, representative background flows reporting from the remainder of the WQCk661 catchment are computed by a watershed model. •A baseline water quality dataset is not available for WQCk661. Therefore, the background term applied to WQ5 (generated using the WQ5 baseline water quality dataset) was used as the background term for WQCk661. While this imparts a degree of uncertainty to water quality predictions for WQCk661, WQ5 was		BC ENV (Andrew Foster)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
32	Appendix 5E - SBEB Summary Appendix H - Water Quality predictions for Al	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	This seems like a reasonable approach from a flow perspective, but I'm not convinced this approach is well supported from a water quality perspective. I'll factor this response into my assessment. Thank-you for the response.	Thank you for the response. Blackwater acknowledges that this comment is closed.		BC ENV (Andrew Foster)	Lorax				Ready for Submission	GM; Aug 4	Ready for Publishing
33	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	"Three datapoints within the WQ5 baseline dataset exceed the proposed SBEB during the fall/early winter season, which reflect natural variability in D-Al concentrations." 1. Were these data points assessed to determine if they were outliers and should be removed from the dataset? 2. Could you briefly outline your rationale for keeping these data points (e.g., December value 0.38 mg/L vs 0.063 mg/L)? 3. Do you have sufficient data to identify outliers and reject them?	1. Yes. The quality assurance/quality control evaluation of the surface water quality baseline dataset did not identify the three particular data points in question as outliers (Application Appendix 2-H). Dissolved Al values above the 95th percentile + 20% seasonal benchmarks were scrutinized to determine whether the data points could be non-representative of the environment (i.e.., potential outliers/errors attributed to sampling error, sample contamination, high suspended sediments load, data entry error, etc...). 2. Data points were included because there was insufficient rationale to exclude them. Of the three WQ5 values noted, two fell within the range of concentrations measured during WQ5 freshet months. The third and highest value (0.38 mg/L) falls within the range of D-Al concentrations measured at other sites (WQ11 and WQ1) and therefore falls within the range of plausible concentrations that may occur at WQ5. Additional		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
34	Appendix 5E - SBEB Summary 5 Summary of SBEB applicability	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide a table summarizing how frequently (e.g., percentage) the proposed SBEBs are predicted to be exceeded by station and season (proposed SBEB period)?	Please refer to attachment "R1_ENV Comment ID 34.pdf".		BC ENV (Andrew Foster)	Lorax		Jorgelina	GM	Ready for Submission	GM; June 21	Ready for Publishing
34	Appendix 5E - SBEB Summary 5 Summary of SBEB applicability	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Can recent data collection (e.g., from 2022) be used to revise and further refine the proposed SBEB? 2. Please provide a count for number of samples from each sampling site by month. I am concerned some uncertainties associated with proposed SBEB concentrations partially stem from a low number of data points in certain months. 3. Please provide the rationale for splitting the months into segments the way you've done it (e.g., why is December lumped in with summer months instead of January/February?). Is this rationale supported by natural processes (e.g., delayed winter) or were these time periods modified based on data? Essentially will how you split the months make sense when more data is available? 4. Please provide a detailed plan for how BW Gold will determine if an exceedance of the Al BC WQG or	Please refer to attachment "R2_ENV Comment ID 34.pdf".		BC ENV (Andrew Foster)	Lorax				Ready for Submission	GM; Aug 11	Ready for Publishing

34	Appendix 5E - SBEB Summary 5 Summary of SBEB applicability	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Thank-you for your response. Below are comments addressing both comment 34 and 35. Some of the following questions were answered in the August 24 Al SBEB meeting, but please provide a written response for documentation purposes. 1.Did the "round 2a response to comment 35" incorporate data up to July 2022? [Clarification] 2.In "Response to Round 2 Review Comment 34" are tables 2-1 and 2-2 reporting "95th percentile concentrations plus 20%" or "95th percentile concentrations" at individual sites (the table caption and headings don't match)? Can tables 4-1 and 4-2 in Appendix 5E be compared directly to tables 2-1 and 2-2 in "Response to Round 2 Review Comment 34"? [Clarification] 3.In "Response to Round 2 Review Comment 34" is the value for "all stations" the 95th percentile of the	1 - Yes. Please refer to the response to Round 3 Comment 2176. 2 - Please refer to the response to Round 3 Comment 2177. To confirm, Tables 2-1 and 2-2 represent the 95th percentile concentrations for individual stations, and the 95th percentile plus 20% under "All Stations". The requested comparison of Tables 4-1 and 4-2 of Appendix 5-E, and Tables 2-1 and 2-2 of "R2_ENV Comment ID 34.pdf" is presented in the forthcoming response to Round 2 Comment 27. See attachment "R2_ENV Comment ID 27_R3_ENV Comment ID 34(2), 34(10) and 2177" 3 - Yes, confirmed. Please refer to the response to Round 3 Comment 2178. 4 - Please refer to the reply for Round 3 Comment 2179. 5 - Comment noted.		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Sept 20	Ready for Publishing
34	Appendix 5E - SBEB Summary 5 Summary of SBEB applicability	Effluent	BC ENV (Andrew Foster)		Oct 24, 2022	4	Follow Up		Yes	1. For Davidson Creek why are maximum predicted Al concentrations in April to July substantially lower than proposed SBEBs? Is this due to proposed water treatment? [Clarification] 2. I will likely recommend ENV accept the proposed Al SBEBs for Davidson Creek pending First Nation review and that these benchmarks be used to support proposed permit conditions. [Comment] 3. As part of the SBEB process, a ENV EIA biologist (me), EIA biologist section head (Sheldon Reddekopp), and First Nations all review and comment on the SBEBs. To facilitate a review by First Nations and the EIA section head, please submit an updated SBEB submission summary report that captures changes that occurred during the review process. [Information Requirement]. The other intent of this request is for ENV to have a clear record of what may be approved and the supporting document for reference in the future. As part of this document, ENV will require a map that clearly shows the proposed SBEB breaks and associated values so it can be easily understood by multiple	1. Maximum predicted concentrations are lower due to Project discharges, which contain lower D-Al concentrations compared to naturally-elevated background concentrations on which the proposed SBEB values are based. 2. This comment is acknowledged. 3. As discussed between ENV, BW Gold, and Lorax in a meeting on November 3, 2022, Lorax will submit an updated SBEB submission summary report that captures the changes that have occurred during Review since the original submission summary was submitted with the Joint Application. The delivery date for the updated submission summary report will be on or before November 30, 2022. 4. This comment is acknowledged. We understand that BW Gold has committed to developing triggers that consider mine waters, discharges, and the receiving environment (per the AEMP). Triggers in the receiving environment are anticipated to reflect BC WQGs. It is anticipated the proposed SBEBs would be considered in		BC ENV (Andrew Foster)	Lorax		Georges			GM; Nov 4	Ready for Publishing
35	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Were any Al trends apparent when comparing historical to recent data or was any trend analysis conducted (e.g., increasing/decreasing aluminum concentrations over time)?	Long-term temporal trends in D-Al concentrations were not discerned within or between stations. This is illustrated in the SBEB Development Plan Figure 2-2 and Figure 2-8, which show time series for water D-Al concentrations in Davidson Creek stations and Creek 661 stations, respectively, for the baseline period. These figures demonstrate the variable ranges of annual D-Al concentrations that have been recorded in the baseline record.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
35	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Visually, based on Figure 2-8 it looks like Al concentrations could have decreased over time at WQ3. Have you conducted analysis (e.g., seasonal Kendall analysis) to show there are no trends or are you basing the lack of trends on visual inspection?	Dissolved aluminum (D-Al) is expected to be present in colloidal form and hence temporal variations observed in the concentrations of this element are considered natural responses to flow and turbidity fluctuations. Statistical explorations of the WQ3 data using a one-way ANOVA showed no significant differences in D-Al concentrations among years ($p = 0.12$). Spearman's test is often used interchangeably with Kendall's given the incredible similarities shared between these tests. Analysis of trends for WQ3 using Spearman's non-parametric correlation analysis indicated that there are no significant relationships between variables ($p > 0.050$). This further supports the lack of significant long-term temporal trends in D-Al concentrations previously stated.		BC ENV (Andrew Foster)	Lorax				Ready for Submission	GM; Aug 12	Ready for Publishing
36	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	What is the rationale for having toxicity testing and temperature data collection at 661-10 in Creek 661 mainstem, rather than in upstream tributaries closer to sediment control ponds (e.g., 661-05, camp site tributary)? My understanding is upstream tributaries are fish bearing or potentially fish bearing and toxicity testing in the mainstem would cause substantial dilution.	Please see the memo titled: Blackwater_AEMP_Comment Responses 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, and 61 for additional information on updated monitoring sites in upper Creek 661. The Camp Site sediment control pond (SCP) discharge location is located upstream of the Aquatic Effect Monitoring Program 661-04 monitoring site. The discharge location and the monitoring site 661-04 are located in Creek 146920 (a tributary to Creek 661). As indicated in response to comment ID #s 151 and 151, the Plant Site SCP will not directly discharge to surface water during any phase of the Project. Site 661-10 was selected for temperature monitoring because temperature monitoring stations are co-located with hydrometric stations. However, as identified in response to comment IDs #39 and 45, hydrometric and temperature monitoring stations will be located at sites 661-09 (on Creek 505659, upstream of the confluence with Creek 661) and 661-01 (on Creek 661 mainstem, upstream of the confluence with Creek 505659). Site 661-09 (temperature) and site 661-10 (toxicity testing) were selected because these locations are downstream from both point source (Camp Site SCP) and non-point source (seepage) sources. In addition,		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 21 Edits made after Ryan's review on June 21 to reflect changes in locations of Camp Site SCP discharge and monitoring locations	Ready for Publishing

36	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Awaiting response from BW Gold	Please refer to response in memo titled: R2_ENV_Comment IDs 36 and 88.		BC ENV (Andrew Foster)	Entia	ERM	Travis		Ready for Submission	RT/TD; Sept 1	Ready for Publishing
36	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Does 661-10 represent worst case water quality conditions (i.e., site where toxicity effects are most likely to occur)? 2. If not, where and when (time of year) would the worst-case water quality conditions occur? This is when and where I'd potentially recommend doing additional toxicity testing. 3. Is there toxicity testing planned when the Camp Site SCP is discharging, if so what? Any acute toxicity testing could be supplemented with annual chronic toxicity tests in the immediate receiving environment downstream of the SCP. 4. I am concerned that although 661-10 may capture all sources that substantial dilution may occur between tributaries and Creek 661 mainstem resulting in less concentrated POCs or impacted temperatures at 661-10 and provide a misleading toxicity assessment of water quality. Please provide rationale as to why my concern is not valid with respect to water quality throughout the year. Item 3 may partially address this.	BW Gold will provide a response to comments related to the Camp Site SCP in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		BC ENV (Andrew Foster)	Entia	ERM			Ready for Submission	TD, Aug 16	Ready for Publishing
37	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. What is the rationale for having DC-15 (far field impact site) so far downstream (~6km downstream of near field)? 2. What additional mine effects are being captured or what aquatic values are important to capture at this station? 3. Are there non-mine inputs between DC-15 and DC-10?	1 and 2. Table 4.2-1 of the Aquatic Effects Monitoring Program (AEMP) Plan indicates that DC-15 is a near field impact site on Davidson Creek. The site, DC-05 (approximately 100 m downstream of the freshwater reservoir (FWR), equivalent to WQ28 from the baseline program), and DC-10 (downstream of FWR and the Downstream Aggregate Borrow Area SCP discharge, equivalent to WQ27 from the baseline program) are near-field sites for point source discharges. DC-15 (equivalent to WQ26 from the baseline program) is a near field site for non-point source discharges in Davidson Creek because there are seepage pathways that could transport unrecovered seepage. It was predicted that unrecovered seepage may enter Davidson Creek at varying distances from the sources at the mine site (see Appendix 5-D [Water Balance and Water Quality Model Report], Table 3-27). Therefore, monitoring at a location further downstream in Davidson Creek (DC-15) that captures influence of both point and non-point source discharges has been included in the AEMP. Monitoring multiple locations downstream of a point source discharge is also consistent with a gradient sampling design, in the event that understanding the extent of effects is necessary in the interpretation of AEMP data. 3. Forestry activities have occurred and may occur in the future along much of Davidson Creek. Overland flows and small tributaries may enter Davidson Creek between DC-10 and DC-15 and could introduce non-mine inputs from naturally-occurring or non-mining activities into Davidson Creek.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 21	Ready for Publishing
37	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. What is the furthest downstream location before non-mine activities would influence water quality? I'm interested in where an observed anthropogenic aquatic impact would likely be related to the mine and at what point it would become more uncertain due to other influences (e.g., forestry, agriculture, etc..) 2. Is there any trigger or mechanism in place to monitor aquatic receptors at DC-10 if impacts are observed or suspected at DC-05? Thank you for your response and your response in comment 74.	1. The updated Table 2.7-1 provided in response to comment 74 in Round 1, indicates that past activities have occurred throughout Davidson Creek. In upper Davidson Creek or areas closer to the mine site (e.g., DC-05, DC-10, DC-15), forestry activities along Davidson Creek have occurred in the past. Baseline studies have likely captured the influence of these activities because they initially occurred more than 15 years ago. At DC-20, forestry and agriculture activities have recently occurred or are currently active therefore potential effects on the aquatic environment may be occurring now. Specific locations for forestry or agricultural activities in the future are difficult to predict. Logging could occur in the future throughout the Davidson Creek watershed, or agricultural activities could be further expanded. In this area cattle are on range and do move around. Any non-Project related activities that occur in the future that have the potential to affect the aquatic receiving environment will be identified and documented in all Aquatic Effects Monitoring Program (AEMP) reports. 2. The trigger response framework described in the Adaptive Management program (Section 6 and Tables 6.2-1 to 6.2-6 of the AEMP Plan; Appendix 7-A) includes management responses to plan and/or implement sampling programs to define "the magnitude, spatial extent, and reversibility of the effect". Under this management response, additional sampling (beyond that monitoring defined in Section 4 of the AEMP Plan; Appendix 7-A) would be planned and conducted to better understand the scope, scale, and extent of an effect. Depending on the likely cause or source of the effect, targeted sampling of various aquatic components (which could include sediment, primary producers, benthic invertebrates, and/or fish) would be completed to supplement data collected under the regular AEMP sampling program.		BC ENV (Andrew Foster)	Entia	ERM			Ready for Submission	RT; Aug. 7	Ready for Publishing
38	Appendix 7-A AEMP Figure 3.1-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Why were the Kuyakuz and Tatelkuz Lake sampling sites shifted from baseline locations?	Baseline sampling of both Tatelkuz Lake and Kuyakuz Lake was completed in 2012 to 2014 at locations near the outlet of each lake. In 2021, quarterly baseline sampling was re-initiated at the new sites at the deepest part of each lake (near the center). Water quality sampling at the deepest part of the lake provides a general representation of the overall mixed lake chemistry (i.e., not influenced by lake inflows). Baseline sampling locations are also located in Chedakuz Creek at the outlet of Tatelkuz Lake (CC-10 in the AEMP, WQ8 in the baseline program) and at the inlet of Tatelkuz Lake (CC-05 in the AEMP). Kuyakuz Lake is the reference lake for Tatelkuz Lake, therefore the water quality monitoring station was also moved to the deepest part of the lake, representing the water quality of the entire waterbody.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
38	Appendix 7-A AEMP Figure 3.1-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response. In the updated baseline report and AEMP please include this rationale so future reviewers will be aware.	The requested information will be added to the 2022 Cumulative AEMP Baseline report (to be prepared in 2023) and to the next version of the AEMP Plan.		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
39	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Why hasn't an upstream reference site for Creek 661 been proposed?	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, June 28	Ready for Publishing
39	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Why is 661-04 450m downstream of the discharge location? Is an initial dilution zone (IDZ) being proposed? 2. Is it possible to use an alterative colour for the invertebrate metal sampling symbol? (For ease of future reviewers; request/comment not requirement)	1. 661-04 is located approximately 450 m downstream of the proposed Camp Site Sediment Control Pond discharge location because this is the first point outside of the mine site boundary on Creek 146920. Sampling closer to the discharge point would be within the mine site boundary, which is fish habitat that is assumed to be lost (see *Fisheries Act Authorization Application*). Sampling within the mine site boundary is not considered the 'aquatic receiving environment'. 2. BW Gold will change the colours for the different AEMP components to make them more distinctive in the next iteration of the Aquatic Effects Monitoring Program Plan. See also the updated map in the attachment "R2_ENV_Comment ID 58 and 64" in response to comment ID #58.		BC ENV (Andrew Foster)	Entia	ERM			Ready for Submission	RT; Aug. 11	Ready for Publishing

39	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Thank-you for your response, 1. ENV will follow up with Federal Agencies to confirm mine boundaries and considered habitat lost at a later date. 2. This approach seems to contradict how aquatic effects monitoring is conducted on Davidson Creek, as DC-05 is within the illustrated mine boundary. Please provide further clarification on your response (i.e., is the mine boundary under the fisheries act different from what has been shown in this application?). Is it different from figure 1.3-1 in chapter 1?	Please refer to response in the attachment "R3_ENV_Comment ID 39 and 46.pdf'		BC ENV (Andrew Foster)	Entia	ERM	Travis		Ready for Submission	RT Aug 30	Ready for Publishing
39	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Sep 27, 2022	4	Follow Up		No	1. If Creek 146920 still functions as a stream and provides habitat for environmental receptors, ENV will likely still consider the area upstream of the mine boundary to be the aquatic receiving environment. ENV may recommend water quality and AEMP sampling further upstream near the edge of the IDZ. 2. Will Creek 146920 or other Creek 661 tributaries still function as watercourses and provide habitat for environmental receptors? 3. Further recommendations may be provided when the plan for Camp Site SCP and associated discharge is submitted.	Thank you for your comments. An IDZ or discharge point for the Camp Site SCP has not been defined as BW Gold is withdrawing the application for effluent discharge for the Camp Site SCP from the Joint Application. These comments will be considered when BW Gold applies for an effluent discharge authorization for the Camp Site SCP in early to mid-2023, well in advance of the anticipated construction activities at this location (late 2023 or early 2024) when water management would be required.		BC ENV (Andrew Foster)	Entia	ERM			Ready for Submission	TD, Sept 28	Ready for Publishing
40	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	What is the rationale for not conducting aquatic resources and fish inventory tissue at DC-10? This appears to be a good spot to capture all mine related effects in Davidson.	Station DC-05 is approximately 130 m downstream of the freshwater reservoir (FWR). A full suite of aquatic monitoring is proposed at DC-05 (sediment, water toxicity testing, aquatic resources, and fish inventory and tissue sampling), as this is expected to be the primary compliance point in the receiving environment, immediately downstream of the FWR. DC-10 is located approximately 1.4 km downstream of the FWR and approximately 100 m downstream of the Aggregate Borrow Area Sediment Control Pond (SCP). Relative to the FWR discharge, discharge quantity from the SCP is small and may not occur all the time. Also, given the proximity to DC-05, the mobility of fish, and absence of fish barriers between DC-05 and DC-10, sampling of fish tissue/fish inventory at these two sites may not yield independent samples. In addition, unrecovered seepage (non-point source discharge) may enter Davidson Creek downstream of DC-10. The water balance model suggests that seepage may enter Davidson Creek throughout its length.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, 15-Jun; Edits made after Travis' review, SCP discharge point confirmed	Ready for Publishing
40	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Depending on the response to comment 37, I may recommend invertebrate community and sediment sampling at DC-10 for 2022 baseline collection only. This could be useful in future comparisons to track the extent of mine impacts before non-mine sources impact water quality. Thank-you for your response.	Baseline sampling of sediment quality and aquatic resources (periphyton biomass, periphyton and benthic taxonomy, and benthic invertebrate tissue metals) was completed at DC-10 (formerly site WQ27) in 2017. Baseline sampling of sediment quality and aquatic resources (periphyton and benthic invertebrates) at this location can be included in the planned program for 2022. Baseline data for all Aquatic Effects Monitoring Program (AEMP) sampling sites (regardless of whether they are part of the regular AEMP monitoring, such as sediment quality and aquatic resources at DC-10) will be included in the 2022 Cumulative AEMP Baseline Report that will be prepared in 2023. No edits will be made to the AEMP Plan (Appendix 7-A) based on the reviewer comment.		BC ENV (Andrew Foster)	Entia	ERM			Ready for Submission	RT; Aug. 7	Ready for Publishing
41	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	For monitoring sites located close to Forest Service Roads (e.g., TC-15, CC-15), it is recommended they are moved further upstream (e.g., 100m upstream of roads) to avoid detecting impacts from the road. Please provide rationale for why these sites need to be so close to the road or proposed relocating them further upstream.	CC-15 is an impact site on Chedakuz Creek because it is downstream of the confluence with Davidson Creek. This site is located within 10 m of the FSR. The adjacent Kluskus-Ootsa FSR road will be used by the Project and any potential effects from increased Project-related traffic is useful to capture in the sampling. In addition, this is a long-term monitoring site (equivalent to WQ9 in baseline studies) that has been regularly sampled on a monthly frequency since 2011, including 5-in-30 sampling. Relocating this site is not recommended. TC-15 is a potential impact site downstream of the airstrip. The adjacent Kluskus-Ootsa FSR will be used by the Project and any potential effects from increased Project-related traffic is useful to capture in the sampling if 10 m or 50 m u/s of d/s. This site is located approximately 50 m from the FSR. Relocating this site is not recommended.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 28	Ready for Publishing

41	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Is the purpose of the site to capture road effects, mine effluent effects, or both? Please explicitly state in the final AEMP. This would be so future reviewers/writers don't overlook potential road impacts when analyzing the data.	The purpose of the Aquatic Effects Monitoring Program (AEMP) sites is to monitor for potential effects due to the Project, which could include both discharge of mine effluent and increased traffic on the roads. However, run-off (quality and quantity) from sites near the FSR is not expected to change as a result of the Project, and would be the same under both existing and future conditions. The potential Project-related effect from roads is from increased traffic and the associated potential increase in dust deposition. While potential effects on the aquatic environment from dust deposition from roads is likely to be negligible relative to mine effluent, it is still a potential Project-related effect. A note will be added to Table 4.2-1 in the rationale column for the sites located proximal to roads (please see the revised Table 4.2-1 that was provided in response to comment ID #58 in the attachment "R2_ENV_Comment ID 58 and 64").		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; jul 2	Ready for Publishing
41	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	1. I am concerned if the intent is to capture road runoff quality as a mine effect that having a site too close to the road (e.g., 10m) would potentially miss plumes from the road or would reflect water quality that is not fully mixed. Please provide rationale for why my concerns are not valid. 2. I understand it would be beneficial to maintain site continuity.	1. The primary intent of the monitoring locations is not to monitor for road runoff quality, particularly from the existing Kluskus-Ootsa Forest Service Road (FSR) where no physical changes to the road are proposed. For sites that are close to the Kluskus-Ootsa FSR, monitoring for effects associated with increased traffic (i.e., dust deposition) could be a secondary purpose for monitoring. However, deposition of dust generated from the road, even with increased traffic, is expected to result in negligible loading of POPCs into adjacent waters, particularly for flowing water courses like Chedakuz Creek or Turtle Creek. Given the negligible loading contributed by dust deposition on flowing water, changes to water chemistry from dust deposition is not expected to be measurable, whether the dust is fully mixed or not. 2. BW Gold acknowledges ENV's comment.		BC ENV (Andrew Foster)	Entia		Ryan		Ready for Submission	RT; aug 30	Ready for Publishing
41	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Sep 27, 2022	4	Follow Up	Comment and Clarification	No	1. CC-15 is located upstream of the bridge, not downstream? [Clarification] 2. Typically ENV recommends site selection that is representative of broader conditions within the creek and is not likely to be skewed by potential road impacts (e.g., runoff). The typical ENV recommendation would be to shift the CC-15 site 50-100m if water quality differences are negligible and data continuity can be preserved. [Comment] 3. It would be beneficial in the 2022 Cumulative AEMP Baseline Report to assess if water quality from this site is potentially skewed by road impacts and representative of broader stream conditions. [Comment]	1. CC-15 is located upstream of the bridge. 2. Run-off from the road will not report to the CC-15 site, as the water quality sampling site is located upstream of the bridge. The only potential road influence would be from dust deposition, and the contribution from dust to water chemistry collected from a flowing stream is negligible. Water quality is the only analytical sample collected at this location; other monitoring includes hydrology, water temperature, and kokanee spawning/escapement surveys which would not be affected by dust deposition from the road. 3. Based on an initial visual examination of water chemistry data presented in Figures 4.1-1 to 4.1-33 in Appendix 2-K (Surface Water Quality Cumulative Baseline Report) for sites WQ9 (CC-15) and WQ13 (CC-20, the next downstream site from WQ9 on Chedakuz Creek), mean concentrations of most parameters are similar between the two sites. Water chemistry between WQ9 (CC-15) and WQ8 (CC-10, located upstream from WQ9 at the outlet of Tatelkuz Lake) is similar for most parameters, except certain parameters such as dissolved aluminum which have elevated concentrations in Davidson Creek (Davidson Creek enters Chedakuz Creek between sites WQ9 and WQ8). No impacts from the road are apparent in the water chemistry data for site WQ9 (CC-15).		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Sept 28	Ready for Publishing

42	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Does Rainbow Trout spawning occur closer to the mine site on Creek 661 or DC-20? 2. If so please propose a near field Rainbow Trout spawning monitoring location or provide rationale for why a closer location is not appropriate.	1. Spawning may occur in areas closer up to the mine site, but the quality of spawning habitat is better in the lower reaches of Creek 661 (i.e.., there is a general trend of decreasing spawning habitat quality towards the upper reaches of Creek 661). 2. As indicated in the Aquatic Effects Monitoring Program Plan (Appendix 7-A), the purpose of the spawning survey is to "provide data on the movement of spawning rainbow trout from Tatelkuz Lake and Kuyakuz Lake into specific watersheds". The sampling in lower Davidson Creek uses channel-spanning hoop nets, which will allow enumeration of migrating fish moving into the Davidson watershed to spawn, rather than directly trying to enumerate spawning sites (which is challenging in this watershed). Conducting the surveys in the lowest reach of the watershed (in Davidson Creek or Creek 661) will allow enumeration of spawning fish because they migrate to all upstream locations, rather than just enumerating a small subset of fish that might spawn in one of the higher-up reaches.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RTI June 19	Ready for Publishing
42	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank you for the response	BW Gold acknowledges the response.		BC ENV (Andrew Foster)	Entia				Ready for Submission	rt; Aug. 2	Ready for Publishing
43	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Is it possible to have AEMP Creek 661 tributary sampling sites closer to the sediment control pond discharge?	The Camp Site sediment control pond (SCP) discharge location is located approximately 480 m upstream of the new Aquatic Effect Monitoring Program 661-04 monitoring site. The discharge location and the new monitoring site 661-04 are located in Creek 146920 (a tributary to Creek 661). Please also refer to response in the memo titled: Blackwater_AEMP_Comment Responses 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, and 61 for additional information on monitoring sites in upper Creek 661. As indicated in response to comment ID#s 151 and 152, the Plant Site SCP is no longer proposed to directly discharge to surface water during any phase of the Project.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT: June 28	Ready for Publishing
43	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thanks for your response. Additional questions are addressed in other comment numbers.	BW Gold acknowledges that the comment is closed.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 2	Ready for Publishing
44	Appendix 7-A AEMP Table 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Please provide and update this table in the final AEMP to explicitly state which references sites are associated with which impact sites (e.g., what is 705-05 a reference site for?). 2. Please update this table to include a station description (e.g., X Xkm downstream of discharge point Y above confluence of Z).	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
44	Appendix 7-A AEMP Table 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response this is very helpful. 1. In the final AEMP, for sites that are a reference location for other streams (e.g., 705-10 for Davidson Creek), please include a table comparing the physical characteristics of the sites (e.g., substrate, water chemistry, stream width, etc..). This could be included in invertebrate community analysis section and is typically covered under the CABIN habitat variables. 2.In the final AEMP, please discuss why each reference site is appropriate and any caveats (e.g., good comparison for water chemistry but stream width is 50% smaller). Addressing these comments gives ENV reviewers perspective when comparing environmental receptor data between sites.	BW Gold acknowledges the reviewer's recommendations. However, BW Gold recommends that the requested information be provided in the 2022 Cumulative AEMP Baseline Report (to be prepared in 2023 once baseline data from 2022 are available, as described in the Round 1 attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf). The intent of the 2022 Cumulative AEMP Baseline Report is to provide baseline information to form the "before" component of the before-after-control-impact analysis proposed in the AEMP Plan. Therefore it is appropriate that the detailed rationale for the selection of reference sites, such the requested table showing physical characteristics of the sites, can be provided in the baseline report. The purpose of the AEMP Plan is to provide the framework for the monitoring program, primarily locations, sampling methods, proposed analysis, and adaptive management. The AEMP Plan would be updated to refer to the requested information about reference locations that would be provided in the 2022 Cumulative AEMP Baseline Report.		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 7	Ready for Publishing
45	Appendix 7-A AEMP 4	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide a flow diagram showing the Creek 661 watershed, discharge locations, and location of monitoring stations.	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jue 28	Ready for Publishing
45	Appendix 7-A AEMP 4	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the map.	BW Gold acknowledges that the comment is closed.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 2	Ready for Publishing
46	Appendix 7-A AEMP 4	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	In the final version of the AEMP, please include flow diagrams to show the relationship between discharge locations, monitoring sites, streams, and where streams confluence with one another. This is very useful tool to show water quality relationships to those not familiar with the site.	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing

46	Appendix 7-A AEMP 4	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the maps these are very useful. To clarify I was actually proposing more of schematic or arrow drawing that shows the relationships at a high level at the cost of losing spatial accuracy. If there's a meeting discussing the AEMP I can show you an example.	BW Gold is familiar with the type of figure ENV was proposing (i.e., a conceptual diagram or graphic, not based on a map, similar to a conceptual model used in water quality model reports). However, we believe that adding insets and flow arrows to the maps shows the same information ENV requested, and maintains the value of spatial accuracy of the actual site locations.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 2	Ready for Publishing
46	Appendix 7-A AEMP 4	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Please provide flow diagrams for Davidson Creek and 661 in addition to the maps. ENV has found these diagrams to be excellent at providing high level information quickly to a range of audiences.	Please refer to response in the attachment "R3_ENV_Comment ID 39 and 46.pdf'		BC ENV (Andrew Foster)	Entia		Travis		Ready for Submission	RT Aug 30	Ready for Publishing
47	Appendix 7-A AEMP Table 5-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Temperatures triggers do not align with BC WQG. BC WQG for freshwater aquatic life is +/- 1 degree beyond optimum temperature range not 2 degrees (https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-guidelines/approved-wqgs/temperature-or.pdf).	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
48	Appendix 7-A AEMP Table 5-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	EAC condition 26 may extend to temperature and the need to meet BC WQG for temperature should be discussed with EAO. A SBEB for temperature may not be feasible or logical.	The comment is acknowledged. BW Gold will initiate discussion with BC EAO and BC ENV to determine the best approach for managing water temperature within the context of EAC condition 26.		BC ENV (Andrew Foster)	Entia		Lesley	TD	Ready for Submission	RT; June 14	Ready for Publishing
49	Appendix 7-A AEMP Table 5-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Why wasn't higher frequency of monitoring proposed when temperatures are close or at potential acute effects?	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
50	Appendix 7-A AEMP Table 5-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Have effluent water temperatures been modelled and are they predicted to exceed BC WQG in the receiving environment?	Modelled predictions from the Application/EIS indicated there will be changes in water temperature in Davidson Creek due to flow augmentation from the FWR (Section 5.3.3.3.8.4.2 Application/EIS). Predicted water temperature values are within the optimal temperature range for all life stages of Rainbow Trout (Comparative Thermal Requirements of Westslope Cutthroat Trout and Rainbow Trout: Implications for Species Interactions and Development of Thermal Protection Standards, Bear et al., Jan. 2011) and for Kokanee eggs and fry in the lower reaches of Davidson Creek (Enhanced Incubation Success for Kokanee		BC ENV (Andrew Foster)	Palmer		Glenn Wagner	TD	Ready for Submission	RT; June 14 TD, Jun 28	Ready for Publishing
50	Appendix 7-A AEMP Table 5-2	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Additional comments may be provided following meetings with EAO/LWRS. 2. Are there any temperature, timing, and fish species combinations on Davidson Creek where it is impossible to achieve both optimum conditions simultaneously (e.g., BC WQG for Kokanee adult spawning vs Rainbow Trout rearing)? 3. Please create a table comparing BC WQG to the optimum temperatures in the literature referenced with timing periods included. 4. Please provide copies of the referenced literature.	2. The water temperatures for the optimal growth of Kokanee eggs and fry (3 to 14 °C) does not overlap with the optimal growth range for Rainbow Trout juveniles (15-19°C)(see attachment: R2_ENV Comment ID 50 Water Temp Comparison Table.pdf; Table 1. Blackwater Water Temperature Comparison for Fish, Palmer 2022). The periodicity of Kokanee eggs and fry (mid-August to the end of April) overlaps with juvenile Rainbow Trout rearing (July to the end of November) for 3.5 months (mid August to the end of November (Figure 5.10-3 of the Application/EIS). Therefore, during this period of overlap, it will not be possible to achieve both optimum conditions simultaneously. However, this type of optimization does not occur under current baseline conditions. 3. A table comparing BC WQG to the optimum temperatures from the cited literature has been attached. 4. The cited literature has been attached.		BC ENV (Andrew Foster)	Palmer			TD	Ready for Submission	TD; Aug 16	Ready for Publishing
51	Appendix 7-A AEMP Table 5-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	This trigger response plan should be re-evaluated as substantial measures addressing the issue (i.e.., temperature) should be made well before lethal effects are possible.	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
52	Appendix 7-A AEMP Table 6.2-5	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Triggers need to be clear and well-defined. How are changes to invertebrate indicators being defined for each indicator (e.g., +/- 2 standard deviations) for each trigger level?	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
52	Appendix 7-A AEMP Table 6.2-5	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	1. Triggers should be clear and well defined in the Trigger response section (i.e., Attachment B). That is, this table or preceding text needs to have sufficient information to be a stand-alone section. For example, what is O:E close to 1 (+/- 0.05, 0.1%)? How is the reference range being defined (+/- 2 SD from reference group mean)? How is the background range being defined? Are you looking at the overall O:E ratio or the ratio for specific groups? What qualifies as EPT losses? This is partially captured in the revised section 4.7.1 but would be good to capture in either the text before the table or immediately following the table. 2.For simplicity, it be better to split out tissue sampling from community metrics. 3. Is the intent for periphyton and invertebrate plans to have clear triggers with a clear response or general guidance? 4. ENV may suggest these issues associated with triggers be addressed on a case-by-case basis using a weight of evidence approach given the variability of invertebrate community metrics. ENV would likely not incorporate this approach as a true "trigger response plan" (i.e., based on Technical Guidance 12: Trigger Response Plans).	As discussed during a clarification meeting with ENV on July 28, 2022, the adaptive management plan in Section 6 of the AEMP Plan was drafted to meet the requirements outlined in EAC Condition 26 and the federal Decision Statement related to adaptive management and quantitative triggers. The triggers, action levels, and responses identified in Section 6 were not necessarily intended to be used by ENV for EMA effluent discharge authorization purposes. BW Gold understands that BC ENV has recently issued new guidance documents for development of trigger response plans (Technical Guidance 12 issued March 2022) and adaptive management plans (Technical Guidance 20 issued June 2022), which were issued after the AEMP was drafted. ENV considered these new guidance documents in their review of the AEMP Plan and found that the AEMP Plan adaptive management described in Section 6 (as well as the Trigger Action Response Plan in Section 5 of the AEMP Plan) does not align with these new guidance documents. BW Gold understands that there are differences between expectations of different regulators (e.g. ENV, EAO, IAAC) in relation to how the results of the AEMP will be interpreted, actioned, and reported. BW Gold is working to try to prepare an AEMP Plan that will meet all regulatory requirements without having to produce multiple different AEMP Plans. To this end, BW Gold proposes to substantially restructure the latter sections of the AEMP and make minor revisions to the earlier sections of the AEMP to try to clarify which components of the AEMP are applicable to which regulatory requirements. Sections 1 to 4 of the AEMP Plan which provide an introduction, overview of consultation and engagement, existing conditions and concerns, and the details of the design of the monitoring program would be relevant to meeting requirements for each regulatory regime (EAC, federal Decision Statement, and EMA permit receiving environment monitoring). Sections 5 through 7 would be substantively restructured and edited so that there are separate sections for EAC Condition 26, Federal Decision Statement, and EMA Permit requirements. This would mean that there would be at least two and potentially three different AEMP annual reports (or sections of a single AEMP report) that would be required that would provide the required information, analysis, and interpretation expected by each regulator to satisfy the different regulatory requirements. Furthermore, as previously mentioned, BW Gold proposes to provide a revised AEMP report to coincide with the end of		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 11	Ready for Publishing
53	Appendix 7-A AEMP Table 6.2-5	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	What changes are considered to be "of concern" and what CABIN status is associated with a given trigger level?	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing

53	Appendix 7-A AEMP Table 6.2-5	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	See comment 52. CABIN thresholds clear now, thanks.	BW Gold acknowledges that the comment is closed.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 11	Ready for Publishing
54	Appendix 7-A AEMP Table 6.2-5	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide justification for the selection of invertebrate metrics. You could consider adding specific metrics that sensitive to certain contaminants of concern (e.g., abundance for increases in nutrients).	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
55	Appendix 7-A AEMP Table 6.2-5	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	The idea of having an invertebrate trigger response plan is interesting and a challenge given natural fluctuations in invertebrate communities and associated metrics. [Comment -no action needed]	BW Gold acknowledges the comment.		BC ENV (Andrew Foster)	ERM		Lesley/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
56	Appendix 7-A AEMP Table 6.2-2, 6.2-3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	For simplification of triggers, it would be useful to set triggers as percentages (e.g., 80% of a BC WQG or SBEB concentration) and then explain changes with additional statistics or comparison to background/reference. Triggers must be clear, well-defined, and enforceable to be approved.	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
56	Appendix 7-A AEMP Table 6.2-2, 6.2-3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		Yes	1. Thanks for your comments. ENV may require water quality parameters are made into a true "trigger response plan" within the EMA permit in relation to permit limits. A more flexible approach would likely be recommended for periphyton and invertebrates.	As discussed during a clarification meeting with ENV on July 28, 2022, the trigger response plan in Section 5 of the AEMP Plan (and the adaptive management in Section 6) was drafted to meet the requirements outlined in EAC Condition 26 and in the federal Decision Statement. BW Gold understands that BC ENV has recently issued new guidance documents for development of trigger		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 11	Ready for Publishing
57	Appendix 7-A AEMP 4.7.1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Clear rationale should be provided to why benthic invertebrate tissue analysis isn't being considered at some scale or level of effort prior to trigger limits being reached. Set percentages compared to background levels should be considered.	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
57	Appendix 7-A AEMP 4.7.1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thanks for the response.	BW Gold acknowledges that the comment is closed.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 11	Ready for Publishing
58	Appendix 7-A AEMP 4.7.1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response. 1. In "Responses for Chapter 2, Comment ID #s 64 to 67 and 77 to 82" in figure 1 please update the inset map to include benthic metal testing (discrepancy between map and inset map) in the final AEMP document. 2. In "Responses for Chapter 2, Comment ID #s 64 to 67 and 77 to 82" Table 1 appears to be missing 661-20. Please ensure the table isn't missing any information.	Please refer to response in the attachment "R2_ENV_Comment ID 58 and 64".		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 11	Ready for Publishing
58	Appendix 7-A AEMP 4.7.1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Benthic invertebrate sampling is typical in most environmental monitoring programs and I may recommend it is required in this program as well. Benthic invertebrate tissue monitoring may provide insight into environmental trends and can be used to supplement or support trends in water or sediment quality. Delaying invertebrate tissue data collection until a trend is identified in another monitoring component would result in the inability to compare trends between water, sediment, and tissue through time.	Rationale for not including benthic invertebrate tissue sampling was provided in Section 4.7-1 of the C.1 version of the Aquatic Effects Monitoring Program (AEMP) Plan (March 2022); however, based on comments 57 to 59, we understand that ENV is not satisfied with the rationale. Therefore, the AEMP Plan will be revised to include benthic invertebrate tissue sampling for metals and moisture content analysis at near field sites on Davidson Creek (DC-05 and DC-15) and Creek 661 (661-04, 661-05 and 661-10) and at reference sites (FC-01 and 661-01) at the same frequency as fish tissue metal sampling.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
59	Appendix 7-A AEMP 4.7.1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. I would consider avoiding sampling in sensitive areas and alternative sampling methods to be valid mitigation (comment). 2. I support invertebrate sampling focused on near field locations where effects directly related to mining are more likely to occur and where no spawning habitat has been identified (comment). Thank-you.	BW Gold acknowledges that the comment is closed.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Aug 11	Ready for Publishing
59	Appendix 7-A AEMP 4.7.1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide additional information on: 1) If there have been any issues to date collecting an adequate amount of invertebrates for tissue sampling, 2) What damage has been done during sampling (if any), 3) If damage to the creeks can be mitigated, and 4) Which sites have high value habitat (e.g., spawning substrate) that are considered to be at risk to intensive sampling. A modified invertebrate sampling program may need to be considered or proposed.	1) There have not been issues collecting sufficient benthic invertebrates for tissue analysis, although 2011/2012 samples were often a single composite sample. 2) Our experience at this and other Project sites is that significant disturbance of creek substrate is required to obtain sufficient sample volumes for tissue metals analysis, even for "micro-prep" analysis of tissue samples (e.g., ALS requires 0.5 g of tissue minimum for micro-prep). Samplers will 'kick up' the substrate for large sections of creek around a sampling site to obtain sufficient sample volumes per replicate. 3) Damage cannot be mitigated other than avoiding sampling altogether in sensitive spawning habitat (e.g., kokanee spawning habitat). It is likely that the stream would recover over time after the sampling event, but any damage to fish eggs already deposited within the substrates at the time of sampling would be permanent.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, 15-Jun	Ready for Publishing

60	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Are there any wetlands close to the mine site (i.e.. upper Creek 661 watershed and upper Davidson Creek) that could be impacted by mine effluent? 2. If so please provide their locations and rationale for why or why not wetlands and their associated receptors should be included in the AEMP.	1. Wetlands are present close to the mine site and have the potential to be affected by the Project (surface water discharge and/or seepage). Wetlands were mapped during spring 2011 and fall 2013 in conjunction with TEM mapping efforts to classify wetland ecosystems (Appendix 2-T of the Application). 2. Wetland sampling locations have not been considered in the Aquatic Effects Monitoring Program (AEMP) because there is a hydrological connection between the creeks sampled as part of the AEMP and the associated wetlands. Therefore any Project related changes observed at water quality monitoring locations on the creeks can be extrapolated to assess potential water quality changes in connected wetlands. In addition, water-dependent wildlife will be monitored as part of the AEMP if triggered through the response framework to aid in the understanding of the effects of water quality guideline exceedances and/or significant Project related changes in water quality.		BC ENV (Andrew Foster)	Entia	ERM	Tonia/Wade	RT	Ready for Submission	RT; June 21	Ready for Publishing
60	Appendix 7-A AEMP Figure 4.2-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Wetlands may act as a sink for parameters of concern (POC) and therefore increase POC sediment concentrations above sediment guidelines which in turn may have an impact on environmental receptors. Sampling on creeks only may not capture these trends or potential impacts. Limited AEMP wetland sampling may be recommended on Davidson Creek. 2. Are there any near field wetlands on Davidson Creek that are likely to act as sinks? 3. Please clarify "hydraulic connection" (groundwater? runoff? stream flows through wetland?) specific to near field Davidson Creek wetlands. Do these wetlands impact water flow or are you suggesting the wetlands are riparian in nature and largely only present because of the creek and associated elevated water table. That is, Davidson Creek flows through the wetland and flow is largely unaffected making it unlikely that the wetlands will act as POC sinks. This would contrast with something like a beaver pond where flow velocity would be greatly reduced and result in increased sedimentation.	1. BW Gold acknowledges the potential recommendation for limited sampling in wetlands near Davidson Creek for the purpose of the Aquatic Effects Monitoring Program (AEMP). However, BW Gold believes that wetland sampling for sediment and aquatic resources is not required because the wetland areas adjacent to Davidson Creek are not likely to be receiving water from Davidson Creek. 2. and 3. As part of the baseline assessments completed in 2013, wetlands were identified in the area of upper Davidson Creek area outside the mine site boundary using Terrestrial Ecosystem Mapping (TEM) (see Figure 3.3-10 in Appendix 2-T of the Application). However, based on the landscape/topography of Davidson Creek, the wetlands are likely discharging to Davidson Creek ("riparian in nature", as referred to by the reviewer) rather than Davidson Creek water discharging into a wetland complex (such as a marsh, swamp, or ponds). Furthermore, EAC Condition 24 Wetlands Offsetting and Management Plan required the monitoring of hydrological function at select wetlands across all types on the mine site by installing shallow groundwater piezometers. The piezometers were installed between June 20 - 30. Please refer to the *'R2 - ENV Groundwater Comment ID 60.pdf' for more information.* If the wetlands are characterized as marshes, swamps, and shallow open water wetlands (and recieving flows from Davidson Creek) there is a potential for an increase in parameters of concern (POC) in wetland sediments (i.e., they act as a POC sink; Hanson et al. 2008). Revisions to the AEMP Plan would be proposed to focus on sampling of inflows and outflows of wetlands characterized as potential sinks in Davidson Creek, if any are identified during 2022 surveys. Hanson, A.L., Swanson, D. Ewing. Grabas, S. Meyer, L. Ross, M. Watmough, and J. Kirby. 2008 Wetland Functions Assessment: An Overview of Approaches. Canadian Wildlife Service Technical Report Series No. 497. Atlantic Region. 59 pp.		BC ENV (Andrew Foster)	Entia	ERM	Tonia/Wade		Ready for Submission	TD, Aug 12	Ready for Publishing
61	Appendix 7-A AEMP Table 4.7-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Additional metrics should be proposed such as #EPT taxa, % Ephemeroptera, % Chironomidae, CABIN metric, etc... 2. Please provide rationale for the chosen metrics and why additional assessment endpoints are not needed; alternatively suggest additional endpoints that could be used.	Please refer to response in the attachment "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission		Ready for Publishing

62	Appendix 7-A AEMP 1.5.2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	The environmental effects assessment should have carried additional POPCs forwards as POCs. In section 1.5.2, please discuss the other POPCs in this section as you have done for aluminum and nitrogen (i.e.., description of POCs and their known effects to local biota or related species)	Updates to Section 1.5.2 of the Aquatic Effects Monitoring Program Plan will reflect the POPCs and POCs identified in response to comment ID #99. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 27	Ready for Publishing
62	Appendix 7-A AEMP 1.5.2	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	Follow Up		No	Awaiting response to EMLI comment 417 submitted August 5, 2022.	This comment is acknowledged.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia		Ready for Submission		Ready for Publishing
63	Appendix 7-A AEMP -	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	The environmental effects assessment should have carried additional POPCs forwards as POCs. Please update the POC information in the final AEMP to reflect ENV's policy to carry the POPCs forward to POCs.	Updates to the Aquatic Effects Monitoring Program Plan will reflect the POPCs and POCs identified in response to comment ID #99. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 27	Ready for Publishing
63	Appendix 7-A AEMP -	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	Follow Up		No	Awaiting response to EMLI comment 417 submitted August 5, 2022.	This comment is acknowledged.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia		Ready for Submission		Ready for Publishing
64	CH2 - Baseline Information 2.9.1.3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Why was Skeena 2010 CABIN model used opposed to Fraser Basin model? 2. Please provide rationale and comparison of sites' features fitting both models. 3. Which reference groups were the sites assigned to and with what probability? 4. How do the habitat attributes at Blackwater sites compare to the model reference group selected vs the groups assigned by the model? 5. What model will be used moving forward (note updated model versions available)?	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
64	CH2 - Baseline Information 2.9.1.3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Please provide an updated version of table 4.2-2 from the AEMP that reflects the proposed changes. For example, site 661-01 changed locations so the original AEMP table is no longer accurate. 2. The questions posed by ENV in this comment must be addressed in the "2022 Cumulative Aquatic Effects Monitoring Program Baseline Report"	1. Please refer to response in the attachment "R2_ENV_Comment ID 58 and 64". 2. BW Gold commits to including responses to the questions posed by ENV in the Round 1 in the 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report that will be provided in 2023.		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT- Aug 11	Ready for Publishing
64	CH2 - Baseline Information 2.9.1.3	Effluent	BC ENV (Andrew Foster)		Oct 28, 2022	3	Follow Up		No	1.Please provide a final version of "Table 4.2-2: Aquatic Effects Monitoring Program Stream and Lake Sampling Scheme" from "R2 ENV Comment ID 58 and 64" that captures all recent changes and reflects the proposed sampling for the AEMP (not 2022 baseline study). Aside from water quality, if any items in the table are not proposed on an annual basis, please note this in the table. [Information Requirement] 2.Please confirm no additional changes are proposed for "Table 4.2-1: AEMP Stream and Lake Sampling Locations and Rationale [Revised]" from "R2 ENV Comment ID 58 and 64." If any changes are proposed	1. An updated Table 4.2-2: Aquatic Effects Monitoring Program Stream and Lake Sampling Scheme from the AEMP Plan is provided in "R3 ENV Comment ID 64.pdf". Table 4.2-3: AEMP Sampling Frequency and Replication is also provided to detail the replication and frequency for each site that is not proposed on an annual basis. 2. An updated Table 4.2-1: Aquatic Effects Monitoring Program Stream and Lake Sampling Sites and Rationale from the AEMP Plan is provided in "R3 ENV Comment ID 64.pdf".		BC ENV (Andrew Foster)	Entia						Ready for Publishing
65	CH2 - Baseline Information 2.9.1.3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please summarize the CABIN benthic invertebrate community classification for each site through time to show how/if invertebrate community status changed during baseline years in a table. Please provide this information in a table or if the table already exists please provide its location in the application.	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing

65	CH2 - Baseline Information 2.9.1.3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for your response. The questions posed by ENV in this comment must be addressed in the "2022 Cumulative Aquatic Effects Monitoring Program Baseline Report"	BW Gold commits to including responses to the questions posed by ENV in the Round 1 in the 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report that will be provided in 2023. BW Gold understands this comment has been closed for the purposes of application review.		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
66	CH2 - Baseline Information 2.9.1.3, table 2.9-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Which location sample areas differed among years and how?	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
66	CH2 - Baseline Information 2.9.1.3, table 2.9-2	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for your response. The questions posed by ENV in this comment must be addressed in the "2022 Cumulative Aquatic Effects Monitoring Program Baseline Report"	BW Gold commits to including responses to the questions posed by ENV in the Round 1 in the 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report that will be provided in 2023. BW Gold understands this comment has been closed for the purposes of application review.		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
67	CH2 - Baseline Information 2.9.1.3, table 2.9-2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	To be informative this summary table should be broken down further into specific sites and year, include standard deviation and other more informative metrics such as EPT richness, CABIN status, mayfly richness, bray curtis etc... Ideally the metrics would align with what will be used in the AEMP. Currently this table provides limited value to the reviewer or for reference in monitoring programs.	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
67	CH2 - Baseline Information 2.9.1.3, table 2.9-2	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. If any impact to an invertebrate community is detected and cannot be shown to be due to natural causes (e.g., landslide), the report must analyze the invertebrate data in more detail to determine what is causing the impact (e.g., nutrient enrichment) and what shift this caused in the invertebrate community (e.g., increase in overall abundance, decrease in EPT, reduced mayfly richness, etc..) 2. This is not a typical requirement for baseline, but necessary given the limited time that will be available to the reviewer.	1. In future AEMP reports where an effect is identified, the cause or source of the effect will be identified. If the cause is not apparent or easily identified, additional sampling may be conducted to "define the magnitude, spatial extent, and reversibility of the effect", as described in Section 6 (Adaptive Management) of the AEMP. 2. BW Gold acknowledges that the questions posed by ENV in the Round 1 comment will be addressed in the 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report that will be provided in 2023. The intent of the cumulative AEMP baseline report is to provide the foundation for the "before" component of		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
67	CH2 - Baseline Information 2.9.1.3, table 2.9-2	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Thank-you for your response. 1. To clarify, If an impact to an invertebrate community is detected during the 2022 baseline assessment and cannot be shown to be due to natural causes (e.g., landslide), the 2022 baseline assessment report must analyze the invertebrate data in more detail to determine what is causing the impact (e.g., nutrient enrichment) and what shift this caused in the invertebrate community (e.g.,	In the 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report that will be provided in 2023, BW Gold will include qualitative evaluation of differences between sampling locations or water courses. These data represent existing conditions prior to Project development so statistical analysis to identify potential mechanisms that may be affecting invertebrate communities at one or more sites prior to mining operations is not the objective of the baseline report		BC ENV (Andrew Foster)	Entia		Ryan		Ready for Submission	RT; aug 30	Ready for Publishing
67	CH2 - Baseline Information 2.9.1.3, table 2.9-2	Effluent	BC ENV (Andrew Foster)		Sep 27, 2022	4	Follow Up		No	Potential mechanisms impacting benthic invertebrate communities must be included in the new baseline report. This information is essential to determine likely causes of invertebrate community shifts. Without this information, my interpretation of the impacts may be required to be more conservative and lead to further AEMP requirements to mitigate uncertainties. Given I will have limited time to review this new document, a more wholesome and well laid out benthic invertebrate community analysis in the report could help provide confidence to ENV and lead to more informed	BW Gold acknowledges ENV's comment and will include an evaluation of potential differences between sampling locations or water courses in the 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report. to be available for review in March 2023.		BC ENV (Andrew Foster)	Entia				Ready for Submission	TD, Sept 28	Ready for Publishing
68	CH2 - Baseline Information 2.9.4, table 2.9-7	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Was any tissue analysis completed on high site fidelity fish species that would reflect data characteristic of specific waterbodies?	Rainbow trout (primarily juvenile fish) were selected for fish tissue sampling at stream locations in 2011, 2012, and 2021. AMEC (2013, provided as Appendix 2-O) indicated that “These samples were collected because the 2011 surveys had shown that the fish community in streams and lakes of the LSA was dominated by one species – rainbow trout. There were no other small, resident fish species such as sculpins that could be sampled for tissue metals concentrations.” Adult rainbow trout, kokanee, and mountain whitefish in 2013 and 2021 were collected from lake sites for fish tissue analysis; these fish species were selected based on input from UFN/LDN. Data from juvenile rainbow trout at the stream sites would be reasonably representative of the waterbody in which they were collected because the fish would have hatched and spent time rearing in their natal streams.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, 15-Jun	Ready for Publishing
68	CH2 - Baseline Information 2.9.4, table 2.9-7	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Is it possible to collect tissue data on streams from a high site fidelity fish species such as sculpin? If so, on which waterbodies? Sculpin opposed to Rainbow Trout juveniles would provide temporal cumulative exposure effects rather than data from a single year. 2. My understanding is Slimy Sculpin are not present in Davidson or 661 Creeks; is this correct?	AMEC (2013, provided as Appendix 2-O of the Joint Application) provided the rationale for targeting Rainbow Trout rather than sculpin or other fish species. AMEC (2013) indicated that “These samples were collected because the 2011 surveys had shown that the fish community in streams and lakes of the LSA was dominated by one species – rainbow trout. There were no other small, resident fish species such as sculpins that could be sampled for tissue metals concentrations.” It is not possible to collect tissue data on stream from a high fidelity fish species such as sculpin. Sculpin or other high fidelity fish species are not present to support an ongoing fish tissue sampling program in streams adjacent to the mine site (i.e., Davidson Creek, Creek 661).		BC ENV (Andrew Foster)	Entia	Palmer			Ready for Submission	RT; Aug. 2	Ready for Publishing

69	CH2 - Baseline Information Figure 2.9-6	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	What caused the substantial increase in Chironomidae between 2012 and 2017 at WQ10?	Chironomidae are often found in large numbers in freshwater systems, as they have a variety of adaptations that allow them to live in a wide variety of environments. Thus, there are number of reasons that could result in a shift in the community composition and without confirmation of a trend it is not possible to assign a cause. The site is not being used as baseline conditions for the Aquatic Effects Monitoring Program (AEMP; Appendix 7-A), thus additional analysis to determine if data collected at the site in 2017 is truly representative of baseline conditions is not warranted at this time. See response to comments #64 to 67 for how benthic invertebrate baseline data will be reviewed for analysis in the AEMP.		BC ENV (Andrew Foster)	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
70	CH2 - Baseline Information Figure 2.9-6	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	What caused drastic shift in invertebrate abundance in 2011/2012 at WQ13 in Chedakuz Creek compared to 2017?	There are a number of reasons that could be related to changes in invertebrate abundance. However, given that the diversity measures or community composition (Figures 2.9-6 and 2.9-7 in Chapter 2) did not vary considerably between sampling years, it would suggest that the shift was not caused by a loss or gain in one or more species. The site is not being used to define baseline conditions for the Aquatic Effects Monitoring Program (AEMP; Appendix 7-A) because aquatic resources sampling is not proposed at this site in the future. Thus, additional analysis to determine if data collected at the site in 2017 is truly representative of baseline conditions is not warranted at this time. See response to comments #64 to 67 for how benthic invertebrate baseline data will be reviewed for analysis in the AEMP.		BC ENV (Andrew Foster)	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
71	CH2 - Baseline Information Figure 2.9-6	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Were CABIN laboratory methods followed when including/excluding certain taxa groups (e.g., Arachnida)? 2. Please comment on how this may have impacted the CABIN classification particularly for WQ8. 3. Please provide rationale for including crustacea and arachnida.	1. Environment Canada CABIN laboratory methods (at the time of reporting the 2014 version was applicable) were followed to identify invertebrates to the lowest possible taxonomic level. The 2014 CABIN database recognized Arachnida as a taxonomic group. Ostracoda, Cladocera/Rotifera, Copepoda, Porifera, Nemata, Platyhelminthes and non-aquatic taxa (e.g., earth worms, spiders) were excluded from abundance and diversity calculations following the Environment Canada CABIN protocols. 2. The same methods (using Environment Canada CABIN protocols) were used in each of the sampling years (2011, 2012, and 2017). At WQ8 in 2017, there was a large number of Hyallela in the sample that were also unique to WQ8 in 2017 (i.e.., no other occurrence of amphipods at other sampled sites). Site WQ8 is at the outflow of Tatelkuz Lake, meaning that this benthic invertebrate composition may differ from other stream sites. The site (new baseline sample name CC-10) will not be sampled again as part of the Aquatic Effects Monitoring Program. Thus, additional analysis to determine if data collected at the site in 2017 is truly representative of baseline conditions is not warranted at this time. See response to comments #64 to 67 for how benthic invertebrate baseline data will be reviewed for analysis in the AEMP. 3. As stated in response to question #1, the exclusion of taxa from analysis followed CABIN protocols. Both crustaceans (e.g., amphipods) and arachnida (e.g., water mites) are considered benthic invertebrates in accordance with CABIN protocols.		BC ENV (Andrew Foster)	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
72	CH2 - Baseline Information 2.9.3.3, Figure 2.9-11	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide a figure that shows known fish spawning locations (e.g., Kokanee, Rainbow Trout, etc...) and other high value aquatic resources (if known). If limited information available, please summarize at the reach scale.	Please see response in attachment "R1_BC ENV_Comment ID 72, 74, 92 Part 1 & 2.pdf"		BC ENV (Andrew Foster)	Palmer	ERM	Tonia	TD	Ready for Submission	TD, Jun 28	Ready for Publishing

72	CH2 - Baseline Information 2.9.3.3, Figure 2.9-11	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response. 1. Please provide the inferred rainbow trout spawning locations in map form in the final AEMP as well as Kokanee spawning locations. 2. Please provide the location of a map with Creek 700 labelled on it (not captured in Figure 1). 3. Please provide the location of a map with Creek 101550, Creek 522107, and Creek 601947 labelled on it (not captured in Figure 1).	1. Please see "R2_ENV Comment ID 72.pdf" for a map showing rainbow trout and Kokanee spawning locations. 2. and 3. Please see "R2_ENV Comment ID 72.pdf" for a map showing the requested Creek labels.		BC ENV (Andrew Foster)	Palmer				Ready for Submission	TD; Aug 15	Ready for Publishing
73	CH2 - Baseline Information 2.7.1, 2.9.1, 2.9.2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	The temporal and spatial gap wording for section 2.7.1 is different from other sections as it refers to no "significant" spatial or temporal gaps. 1. Please elaborate how a lack of significance was determined (e.g., statistical analysis). 2. If gaps are present that aren't statistically significant but impacted analysis please elaborate on these gaps and how they impacted analysis or caused uncertainty in the data.	1. Significance does not refer to statistical significance in this statement. There was no statistical analysis of baseline data completed other than summary statistics for the purpose of model inputs for the water quality model (see Section 5.4 of Chapter 5, Modelling, Mitigation, and Discharges). Instead, BW Gold identified no significant gaps in reference to identification of gaps that could be interpreted with data from other stations or months. For example, there were instances in which some monitoring stations did not have complete monthly water quality datasets and, to obtain a monthly background term, an average of the two shoulder months was used in the model. There were also instances identified where some stations had longer monitoring records than others. Specifically, WQ5 (Creek 661) background terms were applied to both WQ5 and WQCk661 model nodes, and WQ13 (Chedakuz Creek) background terms were applied to WQ13, ChedakuzMidway, and ChedakuzOutlet model nodes. 2. As identified in Section 5.4.12 of Chapter 5 (Modelling, Mitigation, and Discharges), no uncertainties related to the water quality model predictions were associated with gaps in baseline data collection.		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, 15-Jun	Ready for Publishing
74	CH2 - Baseline Information Table 2.7-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide a version of this table that comments on what sites are impacted by previous development (e.g., site located within pasture, site downstream of septic effluent, etc...)	Please see response in attachment "R1_BC ENV_Comment ID 72, 74, 92 Part 1 & 2.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission		Ready for Publishing
74	CH2 - Baseline Information Table 2.7-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response. Please ensure key information from this table is captured and kept up to date in the AEMP. For example, knowledge of recent agricultural and forestry activity at WQ7, WQ8 and WQ9 may aid in interpretation of data (e.g., increasing invertebrate abundance due to nutrient enrichment from farming activity).	The information presented in Table 2.7-1 will be incorporated into the 2022 Cumulative AEMP Baseline Report (to be prepared in 2023). Non-Project activities that occur in the study area that have the potential to affect the aquatic environment (e.g., new forestry or agricultural activity) will be identified and reported in future AEMP reports.		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
75	CH2 - Baseline Information Figure 2.9-14	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Why was there so much variability in Se liver tissue concentrations on Chedakuz Creek? 2. Is this related to fish age, size, or sampled locations?	1. Chedakuz Creek fish tissue concentrations were based on 8 rainbow trout sampled in 2012. One fish (ID# 7-008, Rainbow Trout) had unusually high selenium liver tissue concentrations of 41.4 mg/kg ww relative to the other seven fish (2.4 times greater than the next highest concentration of 17.1 mg/kg ww and 4 times greater than the mean of 0.3 mg/kg ww). Concentrations of several other parameters (aluminum, cadmium, copper, tellurium, vanadium) in this fish tissue were also more than 1.5 times greater than the next highest concentration measured in any sample from any other fish collected for analysis of fish tissue metal concentrations in 2012. 2. Although this fish (ID# 7-008, Rainbow Trout) was relatively large, it was not the largest or oldest fish		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing

76	CH2 - Baseline Information Figure 2.9-14	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Why were liver concentrations so high compared to muscle tissue concentrations in Chedakuz Creek?	See also response to comment #75. The difference between liver concentrations in Chedakuz Creek relative to other sites is because one fish (ID #7-008, Rainbow Trout) had unusually high liver concentrations of selenium and other metals relative to other fish sampled in Chedakuz Creek; however, the concentration of selenium and other metals in muscle from this fish was similar to other fish sampled in Chedakuz Creek. Including fish #7-008 in the summary statistics yields a mean selenium concentration of 13.3 mg/kg ww in liver. Excluding this fish from the summary statistics yields a mean selenium concentration of 9.3 mg/kg ww. Although 9.3 mg/kg ww is still highest among the stream sites, it is in the range of liver selenium concentrations in fish sampled at other sites. If this one fish was excluded, the difference between liver and muscle tissue in fish from Chedakuz Creek would be more similar to other sites. In addition, tissue concentrations in Figure 2.9-14 (Chapter 2) are presented in mg/kg wet weight, as these are the units provided in the AMEC (2013) baseline report (see Appendix 2-O). Wet weight concentrations are influenced by the moisture content in tissues, which may be unintentionally altered by sampling, storage, or transport conditions prior to analysis. In future AEMP analyses, use of dry weight tissue concentrations is recommended to eliminate the confounding variable of moisture content. Additional fish tissue metal baseline data were collected in 2021 and additional sampling is planned at all Aquatic Effects Monitoring Program (AEMP) fish tissue sampling sites in 2022. Upon completion of the 2022 sampling campaign, all available baseline data will be compiled for use in future AEMP analyses (See response to comments #77, 78, 79, 80, 81, and 82).		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
77	Appendix 2-O 5.7.3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Were any outliers flagged during PCA? 2. Please conduct an outlier assessment and comment on any outliers.	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
78	Appendix 2-O Figure 5.10-25	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please replot Figure 5.10-25 with different symbols representing the different lakes/watershed and discuss the result. This needs to be done for each tissue type. The current PCA results do not sufficiently support that there is little variation among watersheds and lakes within tissue types.	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
79	Appendix 2-O Figure 5.10-25	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please conduct a cluster analysis on PCA scores to show if fish from the same waterbody cluster together or are dispersed among clusters	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
80	Appendix 2-O Figure 5.10-25	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please conduct PCA on the unstandardized variables concentrations to see if the interpretation differs and to determine what is driving PCA components	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
81	Appendix 2-O Figure 5.10-25	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	If the above comments (78-80) support waterbodies are different, discriminant analysis must be used to determine if there is a linear combination of variables that separates the waterbodies.	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
82	Appendix 2-O Figure 5.10-24	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide a summary table of fish age and size as well as total number of fish and number of samples taken from each fish used to generate Figure 5.10-24.	Please refer to response in the attachment"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf"		BC ENV (Andrew Foster)	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
83	Appendix 2-O Figure 5.10-24	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Have enough fish tissue samples been collected in each waterbody to provide sufficient baseline characterization and provide sufficient statistical power in future analysis?	Baseline sampling of fish tissue metals has been completed in each of the waterways that will be sampled as part of the Aquatic Effects Monitoring Program (AEMP). In Davidson Creek, 8 rainbow trout were sampled at various locations in both 2011 and 2012. In Creek 661, 8 rainbow trout were sampled at various locations in 2012. In 2013, 10 rainbow trout and 10 mountain whitefish were sampled from Tatelkuz Lake. Sampling was also completed in 2021 and included 8 rainbow trout per site at the following AEMP sampling		BC ENV (Andrew Foster)	Entia	ERM	Lesley	RT	Ready for Submission	RT; June 27	Ready for Publishing
83	Appendix 2-O Figure 5.10-24	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response. Given the temporal gap between fish tissue sampling events combining data from 2011-2013 with 2021/2022 data may not be appropriate. The 2022 sampling program should ensure recent sampling size (i.e., 2021/2022) is adequate for baseline characterization and is likely to achieve statistical power necessary for future analysis.	Thank you for your comment. Part of the analysis to be completed in the 2022 Cumulative AEMP Baseline Report will be an evaluation of whether the older 2011-2013 data can be used together with the newer data (2021, 2022) to form a baseline dataset. It is possible that due to the temporal gap and differences in sampling methodologies that combining these datasets may not be appropriate. A clear recommendation will be made in the 2022 Cumulative AEMP Baseline Report regarding the use of the available baseline data		BC ENV (Andrew Foster)	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
84	CH5 5.9.2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Where will discharge from sediment control ponds (e.g., Camp site, plant site, etc...) meet BC WQG?	Please see attachment "R1_ENV Comment ID 27, 84, 85, 88"and "R1_ENV Comment ID 27, 84, 85, 88.xls"		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 27	Ready for Publishing
84	CH5 5.9.2	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	It sounds like your mixing zone is an initial dilution zone (IDZ). Please see Technical Guidance 11 Environmental Management Act Development and Use of Initial Dilution Zones in Effluent Discharge Authorizations for additional guidance.	BW Gold will provide a response to comments related to the SCPs in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		BC ENV (Andrew Foster)	Lorax				Ready for Submission	TD, Aug 16	Ready for Publishing
84	CH5 5.9.2	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Submitted with ENV 2b comments: Awaiting response from BW Gold	Please see attachment "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" and "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097_AppendixA.xlsx"		BC ENV (Andrew Foster)	Lorax		Georges		20-Sep	GM; Sept 21	Ready for Publishing
85	CH5 5.9.2	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. For discharge from sediment control ponds (e.g., camp site, plant site, etc...) can you provide an estimate for the dilution rate in the receiving environment? 2. Is there an estimate for how much flow the discharge will account for in the immediate receiving environment?	Please see attachment "R1_ENV Comment ID 27, 84, 85, 88.pdf" and "R1_ENV Comment ID 27, 84, 85, 88.xls"		BC ENV (Andrew Foster)	Lorax	KP	Meghan, Cindy	GM	Ready for Submission	GM; June 27	Ready for Publishing
85	CH5 5.9.2	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	Follow Up		No	Awaiting response to comment 84	This comment is acknowledged.		BC ENV (Andrew Foster)	Lorax	KP	Meghan, Cindy		Ready for Submission	GM; Aug 30	Ready for Publishing

85	CH5 5.9.2	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Submitted with ENV 2b comments: Awaiting response from BW Gold	Please see attachment "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" and "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097_AppendixA.xlsx"		BC ENV (Andrew Foster)	Lorax	KP	Meghan, Cindy		20-Sep	GM; Sept 21	Ready for Publishing
86	Appendix 5-D 4.1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	"Aquatic life guidelines used for model screenings were calculated using the corresponding baseline dataset (i.e.., per location), using the same-month median statistic (e.g., for hardness, chloride, etc...), as relevant, for receiving environment nodes. This approach differed slightly for model node WQCk661, for which the WQ5 baseline dataset was used, and for the mid- and lower Chedakuz model nodes for which the WQ13 dataset was used (Figure 3-3 and Figure 3-6). This approach was adopted due to the limited baseline dataset for these nodes, as they reflect locations established for the purpose of water balance model development rather than baseline monitoring locations for the surface water quality discipline.." In my opinion based on the quote above, these nodes are not suitable locations to assess potential environmental impacts until additional data is collected. 1. Could you clarify whether water quality predictions for these model nodes are accurate or reliable	With respect to Question 1), relating to the accuracy and reliability of water quality predictions, we kindly direct the reader to responses provided to Comments 31 and 32. With respect to Question 2), model nodes for WQCk661 and lower Chedakuz Creek were developed to support the characterization of the spatial extent of potential Project effects. Baseline data from WQ5 (for WQCk661) and from WQ13 (for the mid- and lower-Chedakuz nodes) were used as reasonable proxies of background water quality for WQCk661, and mid- and lower-Chedakuz Creek nodes, respectively. These stations were considered to represent reasonable proxies for their corresponding model nodes, as they occur within the same respective watersheds, are subject to similar climatic conditions and local water quality influences, and reflect similar sensitive water uses.		BC ENV (Andrew Foster)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
87	CH6-Environmental Effects Predictions 6.3.4.2, table	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Why weren't any assessment nodes chosen closer to the mine site and further upstream of WQ5? WQ5 is 4 km downstream of the mine footprint and further downstream of sediment control ponds. My understanding is upstream of WQ5, closer to the mine is either fish bearing or potentially fish bearing. I will assume potentially fish bearing streams are fish bearing until shown otherwise.	The WBM and WQM include nodes further upstream than WQ5. For example, the H1 node (9 km2) and H11 node (15 km2) are represented in both models and combine to give predicted flow/water quality condition at the WQ5 node. While the flow signatures at H1 and H11 are anticipated to be dominated by non-contact/background flow, the following contact water signatures are evident at these two stations: H1 – contact GW signature from the Camp site; and H11 – contact GW signatures from the Plant site and Camp		BC ENV (Andrew Foster)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
87	CH6-Environmental Effects Predictions 6.3.4.2, table	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	Follow Up		No	Awaiting response to comment 2097	This comment is acknowledged.		BC ENV (Andrew Foster)	Lorax		Colin		Ready for Submission	GM; Aug 30	Ready for Publishing
87	CH6-Environmental Effects Predictions 6.3.4.2, table 6.3-3	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Submitted with ENV 2b comments: Awaiting response from BW Gold	Please see attachment "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" and "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097_AppendixA.xlsx"		BC ENV (Andrew Foster)	Lorax		Georges		20-Sep	GM; Sept 21	Ready for Publishing
88	CH6-Environmental Effects Predictions 6.3, Table 6.3-3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Were Creek 661 tributaries (e.g., creek 505659, creek 146920) considered as part of the effects assessment? If not could you provide rationale for why they weren't included in effects predictions and if any effects are anticipated in the tributaries.	Please see attachment "R1_ENV Comment ID 27, 84, 85, 88"and "R1_ENV Comment ID 27, 84, 85, 88.xls"		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 27	Ready for Publishing
88	CH6-Environmental Effects Predictions 6.3, Table 6.3-3	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Awaiting response from BW Gold	Please refer to response in memo titled: R2_ENV_Comment IDs 36 and 88.		BC ENV (Andrew Foster)	ERM		Travis		Ready for Submission	RT/TD; Sept 1	Ready for Publishing
88	CH6-Environmental Effects Predictions 6.3, Table 6.3-3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Without an effect assessment on tributaries to Creek 661, a more intensive AEMP and conservative limits at end of pipe or the receiving environment may be required.	BW Gold will provide a response to comments related to the Camp Site SCP in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		BC ENV (Andrew Foster)	Lorax				Ready for Submission	TD, Aug 16	Ready for Publishing
89	CH6-Environmental Effects Predictions Table 6.3-8	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	What is the mean predicted and baseline phosphorous concentrations? Please include standard deviation.	Please refer to attachment "R1_ENV Comment ID 89 92(3) 93.pdf"		BC ENV (Andrew Foster)	Lorax		Jorgelina	GM	Ready for Submission	GM; June 21	Ready for Publishing
90	CH6-Environmental Effects Predictions 6.3.4.3, TDS	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	ENV does not allow for effects within 50% of a populations and sets thresholds using much lower EC values and through safety factors. An EC10 or NOEC would be a more appropriate proposed threshold. 1. Did a review of the literature find a lower benchmark or can any of the benchmarks (e.g., EC50) be back calculated to a EC10 or NOEC? 2. Does Weber Scannel and Duffy (2007) have a threshold value below an EC50 calculated?	1. To our knowledge, a low number of values below the proposed benchmark exist in the scientific literature, but these values are considered inappropriate to use as the basis for a benchmark in the Project area. The proposed benchmark of 500 mg TDS/L was selected because it is based on the most sensitive endpoint available in acceptable literature for species relevant to the Project area. The calculation of EC10 from reported benchmarks (e.g., EC50) is not feasible, given that EC_x values are generally derived using a dose		BC ENV (Andrew Foster)	Lorax		Jorgelina	GM	Ready for Submission	GM; June 14	Ready for Publishing

91	CH6-Environmental Effects Predictions Figure 6.3-7	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. How did the model adjust for concentrations of aluminum or other parameters between WQ5 and WQCK661? Or does WQCK661 just use WQ5 data? 2. If WQ5 and WQCK661 have identical values for metals what value does having a node at WQCK661 have? 3. Are the predicted values at WQCK661 likely to reflect field conditions? I am concerned WQCK661	1. The current configuration of the water quality model assigns WQ5 background water quality for both the WQ5 and WQCK661 nodes. 2. The WQCK661 node gives an indication of further change/dilution of contact water signature evident at WQ5 (drainage area approximately 25 km2) to WQCK661, which is further downstream (drainage area >58		BC ENV (Andrew Foster)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
92	CH6-Environmental Effects Predictions Table 6.3-5,	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	1. Please provide an updated version of this table (or summary) that has a comment column outlining existing impacts (if any) for each station (e.g., WQ9 nutrient enrichment from septic fields from X) and another column indicating if the station data reflects unimpacted nutrient baseline conditions (e.g., free from agricultural or cattle). 2. If the station has known enrichment impacts please state this (e.g., increased invertebrate	Please see response in attachment "R1_BC ENV_Comment ID 72, 74, 92 Part 1 & 2.pdf" for responses to 1) and 2). Please refer to attachment "R1_ENV Comment ID 89 92(3) 93.pdf" for the response to 3).		BC ENV (Andrew Foster)	Lorax	ERM	Meghan/Tonia	GM	Ready for Submission	GM; June 23	Ready for Publishing
92	CH6-Environmental Effects Predictions Table 6.3-5, 6.3.4.3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for the response. No additional comments at this time.	BWG acknowledges that the comment is closed. Thank you		BC ENV (Andrew Foster)	Lorax			GM	Ready for Submission	GM; July 29	Ready for Publishing
93	CH6-Environmental Effects Predictions Table 6.3-4, Table 6.3-8, Figure 6.3-11	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	I'm concerned the use of trophic ranges combined with maximum baseline data leads to a misleading benchmark or threshold. Do you have an alternative suggestion to supplement these benchmarks (E.g., baseline mean + 50% from CCME)? For example comparing WQ26 and WQ27 in table 6.3-8, if WQ26 maximum is increased by 0.001 mg/L it would exceed the benchmark compared to 0.014 mg/L needed at WQ27 needed to exceed a benchmark.	Please refer to attachment "R1_ENV Comment ID 89 92(3) 93.pdf"		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 23	Ready for Publishing
93	CH6-Environmental Effects Predictions Table 6.3-4, Table 6.3-8, Figure 6.3-11	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	Thank-you for your response. Please include both benchmarks (i.e., baseline mean + 50% and CCME Trophic Status Category Benchmark) in the AEMP for future reference.	Thank you for the response. Both benchmarks will be included in the next iteration of the AEMP for reference.		BC ENV (Andrew Foster)	Lorax	Entia	Meghan/Lesley		Ready for Submission	GM; Aug 4	Ready for Publishing
94	CH6-Environmental Effects Predictions 6.3.4.3 - Aluminum	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	"In the case of the March background term, the value is based on the average of the February (0.032 mg/L) and April (0.119 mg/L) terms as no March samples were collected during the baseline program." "As such, the background terms for March and December for Creek 661 model nodes reflect limited datasets that require verification through ongoing monitoring." I would consider having no aluminum water quality data for March a gap in data that needs to be acknowledged, especially given a SBEB was developed for Al. This would contradict earlier screening responses that there were no data gaps. 1. Please reassess if any gaps in data are present, summarize them in a table, outline how these gaps impacted your analysis, and if any additional data collection is needed. If creek 661 has a limited data set, I see this as a source of uncertainty that needs to be assessed and discussed when outlining potential environmental impacts. 2. Is this limited dataset restricted to aluminum or all parameters? 3. Why wasn't data collected in March?	1. See also the response to comment #73, whereby no significant gaps were identified in the baseline data in reference to identification of gaps that could be interpreted with data from other stations or months. For example, there were instances in which some monitoring stations did not have complete monthly water quality datasets and, to obtain a monthly background term, an average of the two shoulder months was used in the model. There were also instances identified where some stations had longer monitoring records than others. Specifically, WQ5 (Creek 661) background terms were applied to both WQ5 and WQCk661 model nodes, and WQ13 (Chedakuz Creek) background terms were applied to WQ13, ChedakuzMidway, and ChedakuzOutlet model nodes. 2. BW Gold does not see baseline data as a limited dataset. As identified in Section 5.4.12 of Chapter 5 (Modelling, Mitigation, and Discharges), no uncertainties related to the water quality model predictions were associated with gaps in baseline data collection. 3. Beginning in 2017, Stations in Creek 661 were sampled on a quarterly basis (and prior to this, the was sampled monthly beginning in May to December). However, beginning in 2021, with the development of the		BC ENV (Andrew Foster)	Lorax	ERM	Meghan/Tonia/Lesley	GM	Ready for Submission	GM; June 15	Ready for Publishing
94	CH6-Environmental Effects Predictions 6.3.4.3 - Aluminum	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Data gap and Blackwater Gold's interpretation of the gap is acknowledged. Thank-you for your response. 2. ENV may recommend the Al SBEB be recalculated to include more recent data collection rather than as a verification of the existing SBEB.	1. Thank you for the response. Blackwater acknowledges that this comment item is closed. 2. This comment is noted. For reference, updated proposed SBEBs calculated using baseline monitoring data up to July 2022 are presented in the memo response to Round 2 Comment 34 ("R2_ENV Comment 34.pdf")		BC ENV (Andrew Foster)	Lorax				Ready for Submission	GM; Aug 11	Ready for Publishing
95	CH6-Environmental Effects Predictions 6.3.4.3 - Aluminum and nitrogen forms	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Note: If this chapter is updated please move the aluminum graphs out of the nitrogen forms section. No action needed.	BW Gold acknowledges the comment. The Application will not be revised during the Application Review period.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 15	Ready for Publishing

96	CH6-Environmental Effects Predictions 6.3.4.3, Table 6.3-7	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Almost half (5/12) months of data for WQ5 on Creek 661 are missing in this assessment. I would consider this a gap in data that needs to be acknowledged. Please reassess if any gaps in data are present, summarize them in a table, outline how these gaps impacted your analysis, and if any additional data collection is needed. If creek 661 has a limited data set, I see this as a source of uncertainty that needs to be assessed and discussed when outlining potential environmental impacts.	The baseline T-N/T-P ratios shown in Section 6.3.4.3 are calculated from baseline data from 2016 to 2020. The phosphorus parameters orthophosphate and total dissolved phosphorus were monitored at WQ5 from May 2011 to December 2014. The phosphorus parameters orthophosphate and total phosphorus have been monitored at WQ5 since 2016. Therefore, monitoring of phosphorus parameters at WQ5 has occurred since 2011 (from which nutrient status may be estimated), and was not therefore identified as a surface water quality data gap. See also the response to comment #73, whereby no significant gaps were identified in the baseline data from which gaps could be interpreted with data from other stations or months. It is noted that baseline T-N/T-P ratios presented for WQ5 in Table 6.3-7 fall within the same magnitude as ratios calculated for other stations in the project area. The months for which baseline T-N/T-P ratios are not available can be generally inferred to fall within similar ranges as ratios shown for other stations. There are no known sources or activities in the Creek 661 watershed that would suggest baseline T-N/T-P ratios for those months would substantially differ from those calculated for other stations.		BC ENV (Andrew Foster)	Lorax	ERM	Meghan/??	GM	Ready for Submission	GM; June 21	Ready for Publishing
97	CH6-Environmental Effects Predictions 6.3.4.3, Table 6.3-7	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Please provide additional information on why WQ5 was removed from the data set and why nitrate may have been elevated in 2013 and 2014 compared to more recent years?	The baseline T-N/T-P ratios shown in Section 6.3.4.3 are calculated from baseline data collected from 2016 to 2020. It is acknowledged the sentence referred to in this comment is misleading and should be rephased to: "*Certain WQ5 samples collected in 2013 and 2014 contained elevated nitrate concentrations compared to samples collected in later years, which are* ***not reflected in*** *baseline ratios shown in Table 6.3-7* ." These values **are** reflected in T-N/T-P ratios calculated for WQ5 for Construction and Operations in Table 6.3-7, however (because those nitrate concentrations would be included in background model terms), and are drivers of the differences between the baseline and Construction/Operations ratios. The WQ5 2013 and 2014 nitrate concentrations referenced in the above statement (January 13, 2013: 0.12 mg-N/L; April 15, 2013: 0.16 mg-N/L; April 13, 2014: 0.27 mg-N/L) are higher relative to concentrations typically measured in other WQ5 baseline samples (median=0.009 mg-N/L). The reason for these small increases is unclear and may be attributed to natural variability. These sample concentrations fall at least one order of magnitude below the BC long-term water quality guideline.		BC ENV (Andrew Foster)	Lorax	ERM	Meghan/Lesley	GM	Ready for Submission	GM; June 21	Ready for Publishing
98	Response to ENV Screening Comment 64 Table 3-1	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Why do T-Cr, T-Fe, and T-Zn concentrations increase substantially between WQ27 and WQ7	Elevated concentrations of certain metals at WQ7 compared to upstream stations were noted in the baseline surface water quality report (Application Appendix 2-H) but the cause of the elevated concentrations was not identified. Excerpt from Application Appendix 2-H: *"Guideline exceedances were also observed at the furthest downstream site on Davidson Creek (WQ7). Water quality guideline exceedances for total chromium, total copper, total iron, and total and dissolved zinc were observed at this site at frequencies greater than at the upstream sites. Mean monthly concentrations of total zinc exceeded the hardness-dependent BC water quality guideline at this site in several months (Figure 4.1-32). However, sample-specific of exceedances of total and dissolved zinc were restricted to those collected during 2011 - 2014 and analyzed by AMEC. The maximum measured zinc concentration at WQ7 (0.133 mg/L, June 2012) is greater than the 99th percentile of values for this site and is therefore an outlier. Previous assessments of elevated metals in lower Davidson Creek (AMEC 2013, ERM 2018) that included this data point likely overestimated baseline zinc concentrations at this site. Total chromium and total iron exceedances were not observed elsewhere in Davidson Creek. The cause of elevated metal concentrations at WQ7 was not identified."*		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
98	Response to ENV Screening Comment 64 Table 3-1	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Is there any concern that data collected in 2011-2014 is less reliable than more recent data? 2. Is there a likely explanation why 2011-2014 data contained all the exceedances? 3. Are there any suspected sources of Cr, Fe, and Zn between WQ27 and WQ7?	Please see attachment "R2_ENV_Comment ID 98.pdf"		BC ENV (Andrew Foster)	ERM	Entia	Tonia/Lesley		Ready for Submission	RT: Aug 10	Ready for Publishing

99	CH6 - Environmental Effect Predictions 6.3.4.3, Figure 6.3-3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	As noted during screening the response to comment 64 contained most of what would be expected in an effects assessment of POCs, but additional information is needed. 1. In addition to the response to screening comment 64, a discussion of potential or typical effects associated with a given parameter to complete the POC effect assessment. Discussion length may be brief for parameters determined to have low risk based on data provided. 2. Please provide untreated effluent data. Untreated effluent data is used for screening POPCs as ENV must consider a scenario where water treatment is not in place. Treated effluent data may be used as part of the effects assessment.. The provided response to screening comment 64 is not consistent with ENV's POC Mining factsheet located here: https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/guidance-documents/parameter_of_concern_fs.pdf	As discussed between the proponent and ENV on June 7, 2022, an "Untreated Effluent" model scenario has been conducted. Please refer to attachment "R1_ENV Comment ID 99.pdf".	Yes	BC ENV (Andrew Foster)	Lorax	Entia	Meghan/Leslie	GM	Ready for Submission	TD, 15-Jun GM; June 21	Ready for Publishing
99	CH6 - Environmental Effect Predictions 6.3.4.3, Figure 6.3-3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	2	Follow Up		No	1. Zinc should have been carried forward as a POC per ENV policy and an effects assessment should have been conducted for it. [Comment]	Thank you for the response. Blackwater acknowledges that this comment is closed.		BC ENV (Andrew Foster)	Lorax				Ready for Submission	GM; Aug 4	Ready for Publishing
100	CH6 - Environmental Effect Predictions 6.3.4.3, Figure 6.3-3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	ENV's Guidance for the Derivation and Application of Water Quality Objectives in British Columbia is guidance for Water Quality Objectives and is not a guidance document for screening POPCs/POCs. These are two different policies. Using a parameter's baseline 95th percentile concentration + 20% is not an approved method for screening out POPCs, but this rationale can be used in the POC effects assessment. [Comment]	This comment is acknowledged. Please refer to attachment "R1_ENV Comment ID 99.pdf".		BC ENV (Andrew Foster)	Lorax	Entia	Meghan/Leslie	GM	Ready for Submission	GM; June 21	Ready for Publishing
101	CH6 - Environmental Effect Predictions 6.3.4.3, Figure 6.3-3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	The aluminum SBEB has not been accepted and aluminum is not exempt from an effects assessment.	This comment is acknowledged. Dissolved aluminum was included in the aquatic effects assessment presented in Section 6.3 of the Application.		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 17	Ready for Publishing
102	CH6 - Environmental Effect Predictions 6.3.4.3	Effluent	BC ENV (Andrew Foster)		Jun 01, 2022	1	New		No	Provide an effect assessment for POCs that exceed BC WQG in closure and post closure. Emphasis should be placed on those parameters (e.g., Cd) that exceed acute guidelines. ENV is concerned about the high concentrations of POCs predicted in closure and post closure and this may be factored into EMA permit decisions for the construction and operations phases.	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		BC ENV (Andrew Foster)	Lorax		Meghan	GM	Ready for Submission	GM; June 29	Ready for Publishing

102	CH6 - Environmental Effect Predictions 6.3.4.3	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	Follow Up		No	Awaiting response to EMLI comment 417 submitted August 5, 2022.	This comment is acknowledged.		BC ENV (Andrew Foster)	Lorax		Meghan		Ready for Submission	GM; Aug 30	Ready for Publishing
102	CH6 - Environmental Effect Predictions 6.3.4.3	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	3	Follow Up		No	Submitted with ENV 2b comments:	Please refer to attachment "R2_EMLI_Geoscience_Comment ID 417.pdf" submitted August 25, 2022, which addresses items a) through f) , h), and i) of Round 2 Comment 417. It is noted that responses to items g) and j) of Comment 417 were under development at the time of writing. Please refer to responses provided to corresponding Round 2b comments for further detail.		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Sept 16	Ready for Publishing
102	CH6 - Environmental Effect Predictions 6.3.4.3	Effluent	BC ENV (Andrew Foster)		Sep 20, 2022	4	Follow Up		No	ENV is concerned with the prospect of treatment in perpetuity and associated risks in post closure. The following are intended to better inform the ENV Statutory Decision Maker of those risks. 1.Please complete Parameters of Potential Concern (POPC) and Parameters of Concern (POC) screening for post-closure similar to what was provided in "Response to Round 1 Review Comment 99." That is, the response should show what predicted water quality concentrations are at WQ28 in Davidson Creek in post-closure without and with treatment [Information Requirement]. 2.It is my understanding that cadmium represents the greatest risk to environmental receptors (specifically Rainbow Trout) in post closure. Is this correct? [clarification] 3.In post-closure, assuming no water quality treatment, where would aqueous cadmium concentrations meet acute and chronic BC WQG in Davidson Creek? [Information Requirement] 4.Please provide an effects assessment for the POC (e.g., cadmium) that would represent a worst-case untreated effluent scenario for impacts on environmental receptors in post-closure.	Please refer to attachment "R4_ENV Comment ID 102.pdf" and R4_ENV Comment ID 102 Appendix B.xlsx		BC ENV (Andrew Foster)	Lorax				21-Oct-22	GM; Oct 21	Ready for Publishing
102	CH6 - Environmental Effect Predictions 6.3.4.3	Effluent	BC ENV (Andrew Foster)		Nov 01, 2022	5	Follow Up	Comment and Information Requirement	No	1. It is correctly noted in the response to round 4 review comment 102, that using BC WQGs based on induced hardness rather than baseline hardness would provide a more accurate effects assessment. [Comment] 2. Please provide an updated version of Table 3-4 and 3-5 that compare to BC WQGs derived using induced/modelled hardness in the receiving environment rather baseline concentrations. [Information Requirement] 3. In the revised Table 3-4 and Table 3-5, please state what hardness was used to generate the BC	Please refer to attachment "R5_ENV Comment ID 102.pdf"		BC ENV (Andrew Foster)	Lorax				Nov. 20	GM; Nov 14	Ready for Publishing
103	Joint MA/EMA Permits Application n/a	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please ensure that all appendix reports included in the application are indexed with bookmarks in Adobe so that reviewers can easily navigate these large documents.	BW Gold acknowledges this comment and will submit any new documentation with easily navigable bookmarks.		BC ENV (E.Rainy)	ERM		Everyone	RT	Ready for Submission	RtT; June 19	Ready for Publishing
104	Joint MA/EMA Permits Application Chapter 1, Section 1.3.6	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please clarify the assumed discharge locations to the receiving environment during closure (Mine Life Year 24 to when pit fills).	The Closure phase (Year +24 to approximately Year +45) occurs from the end of ore processing to the period when the Pit Lake has filled to design capacity. During the Closure phase, water from the freshwater reservoir will be discharged to Davidson Creek (at the same location as during Operations). During the Closure phase, the sediment control ponds (SCPs) for the Camp Site and Downstream Aggregate Borrow Area will be decommissioned. Prior to decommissioning, the Camp Site SCP will discharge to Creek 505659 (a tributary of Creek 661) and the Downstream Aggregate Borrow Area SCP will discharge to Davidson Creek (at the same locations for SCP discharges during Operations). Non-point source discharges (groundwater) to Davidson Creek and Creek 661 will also continue through Closure.		BC ENV (E.Rainy)	ERM	LP	Tonia, Cindy, Stephanie	RT	Ready for Submission	RT; June 20	Ready for Publishing

105	Joint MA/EMA Permits Application Chapter 1, Table 1.3-5	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please clarify and include the consultant responsible for the design of the two Membrane Water Treatment Plants in this table.	Table 1.3-5 has been revised to include information regarding the consultant responsible for the design of the Membrane Water Treatment Plants: Consultant - BQE Water Area of Responsibility - Membrane Water Treatment Plant design		BC ENV (E.Rainy)	ERM		Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
106	Joint MA/EMA Permits Application Chapter 3, Section 3.4.1.4	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Please demonstrate that the discharge from the Davidson Creek Diversion System to Davidson Creek downstream of the Stage 1 Main Dam C is considered to be a clean water (non-contact) diversion, i.e.., does not require authorization under the Environmental Management Act.	The Davidson Creek Diversion System (DCDS) is a construction diversion to route runoff from the upstream catchment area of the Main Dam C around the construction work area. The Diversion Berm will impound natural flows (non-contact waters) upstream of the construction area and return them into the creek downstream of the construction area. The berm will be constructed with locally sourced materials. Overburden sourced for construction of the berm will undergo solid phase monitoring as described in the ML/ARD Management Plan prior to use to confirm that the material is NPAG with low metal leaching potential, which will limit the effect on water quality of the water diverted by the DCDS to downstream of the construction work area.		BC ENV (E.Rainy)	KP	Lorax	Dan/Greg/Meghan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
107	Joint MA/EMA Permits Application Chapter 3, Section 3.4.2.6	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	The application is not clear on the sequence of commissioning and discharge to the receiving environment during construction. Please confirm if the TSF seepage water collected in the IECD in Year -1 will be pumped back to the Stage 1 TSF pond? Or will it be allowed to discharge via the spillway to Davidson Creek? Direct discharge to Davidson Creek may require authorization under the Environmental Management Act during this period if the FWR is not fully commissioned.	Any water collected at the IECD prior to waste placement in the TSF (i.e.. construction area runoff) will either be released via the spillway or otherwise managed by temporary pump systems and conveyed to the pond upstream of the Diversion Berm for release via the Davidson Creek Diversion System. Once PAG waste rock placement begins between Main Dam C and the Diversion Berm and water is allowed to accumulate to saturate the waste rock voids, water quality from any seeps discharging upstream of the IECD pond and at the IECD pond will be monitored to evaluate if seepage of contact water is contributing to the IECD. Any		BC ENV (E.Rainy)	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
108	Joint MA/EMA Permits Application Chapter 3,	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	The application states that during Year -1 the WMP will discharge to the Davidson Creek downstream of the (future?) FWR, and the open pit will be dewatering, treated and sent to the WMP (Chapter 5). If there is potential for mine site runoff (contact water) in the WMP, then discharge of the WMP directly to Davidson Creek may require authorization under the Environmental Management Act during this period. This potential source of effluent discharge to the receiving environment during construction	The WMP Discharge System will likely discharge flows to Davidson Creek prior to completion of construction at the FWR. The initial discharge from the WMP will effectively be a construction diversion similar to the Davidson Creek Diversion System (DCDS), but will manage flows from the mine area creek and convey them around the Main Dam C construction area. Any flows in excess of the WMP storage capacity that are not diverted by the WMP Discharge System will flow via the pipe outlet from the WMP towards the DCDS where		BC ENV (E.Rainy)	KP	Lorax	Cindy/Dan, Meghan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
109	Joint MA/EMA Permits Application Chapter 3, Section 3.5.6.6	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	It is recommended that the applicant confirm with Environment and Climate Change Canada, prior to this application going to the ENV statutory decision maker, that the use of the Freshwater Reservoir as a collection point for both contact and non-contact water complies with the Metal and Diamond Mining Effluent Regulations (MDMER), which specifies that the owner or operator of a mine must "not combine effluent with water or any other effluent for the purpose of diluting effluent before it is deposited" (MDMER section 6).	BW Gold met with Environment and Climate Change Canada (ECCC) on October 20, 2021, to discuss the effluent discharge plan in the context of the Metal and Diamond Mining Effluent Regulations (MDMER). The presentation by BW Gold included the description of the proposed Final Discharge Points (as listed in Table 5.8-1 of Chapter 5) and flexibility of the water management process through Operations to meet site water demands (i.e.., mill water demands) and environmental objectives (i.e.., instream flow needs in Davidson Creek). On November 24, 2021, ECCC provided a response to BW Gold that they acknowledged the discharge plan as described in the presentation and had no further questions regarding the proposed Final Discharge Points for the Blackwater Gold Project.		BC ENV (E.Rainy)	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
110	Joint MA/EMA Permits Application Chapter 5, Section 5.3.2	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Related to the above comment, discrepancies have been noted in application sections regarding the timing and assumptions of the construction and commissioning of WMP and FWR. The water balance model assumes the FWR is commissioned and storing water as of Year -1, with the WMP constructed in Year -1, then storing and discharging to FWR. This is opposite of what is described in Chapter 3, where the WMP is constructed and commissioned prior to FWR. Please confirm the sequence of construction, commissioning and discharge timing of the WMP and FWR during construction (Years -2 and -1).	The water balance modelling presented in the Application was based on the assumed sequence of construction, which will continue to be refined in the lead up to construction of the project facilities. It is currently anticipated that the WMP will be constructed prior to the FWR as it is needed to divert flows for construction of Main Dam C and to temporarily store flows to facilitate and limit risk during certain aspects of FWR construction, such as diversion of Davidson Creek through the low-level outlets prior to substantial dam construction. The WMP will be constructed in Year -2 and the FWR in Year -1. Please see the additional discussion provided in response to Comment ID #108.		BC ENV (E.Rainy)	KP	Lorax	Cindy/Dan, Colin	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

111	Joint MA/EMA Permits Application Chapter 5, Section 5.3.2.1	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please clarify when (i.e., mine year, month) the membrane and metals water treatment plants are assumed to be commissioned and operating to treat mine contact water? It is noted that the water balance model assumes that pit dewatering will be treated and discharged to the WMP in Year -1.	The Metals WTP is assumed to be commissioned in Year -1 to treat water collected from the open pit. The Membrane WTP is assumed to be available in Year 1 to treat surplus water in the TSF, if required.		BC ENV (E.Rainy)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
112	Joint MA/EMA Permits Application Chapter 5, Table 5.3-3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	It is noted that the units for the dry ore production in this table should be million tonnes per year (e.g., 15,000 tpd*12 months = 5.5 Mtpy) not million tonnes per day, as shown.	BW Gold acknowledges this comment. Thank you for pointing out the discrepancy and the correct units.		BC ENV (E.Rainy)	KP		Cindy	AT/KP	Ready for Submission		Ready for Publishing
113	Joint MA/EMA Permits Application Chapter 5, Section 5.3-3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please clarify where the tailings consolidation seepage is assumed to contribute to in the water balance model? It is noted that this section mentions that it contributes to both the TSF ponds, as well being captured in the IECD and ECD (Section 5.3.3.7). What proportion of the consolidation seepage is assumed to contribute to each TSF pond, versus as seepage lost from the facilities?	The water balance model assumes 80% of the consolidation seepage in each TSF reports to the respective TSF Pond. The remaining 20% seepage from TSF C is assumed to flow in the subsurface beneath the dam. TSF C Consolidation seepage contributes to the IECD prior to Year 7, to the TSF D Pond from Year 7 to Year 22 when tailings is placed in TSF D, and to the ECD from Year 22 on. Approximately 10% of the TSF C consolidation seepage that flows in the subsurface beneath the dam is assumed to flow beneath the West Dam and report to the West Dam seepage sump starting in Year 10. The remaining 20% consolidation seepage from TSF D that does not contribute to the pond is assumed to flow beneath Main Dam D and contribute to the ECD.		BC ENV (E.Rainy)	KP		Cindy	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
114	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please provide the name and qualifications of the person(s) that completed the Best Achievable Technology assessments for the Metals WTP and Membrane WTP.	The assessment of best achievable technology for sulphate control (membrane WTP) was documented in a report titled "Sulphate Removal from Blackwater Tailings Storage Facility Supernatant and Seepage during Closure and Post-Closure" (BQE Water, 2017).		BC ENV (E.Rainy)	BQE	McCue	V. Sundar	GM	Ready for Submission	GM, June 16	Ready for Publishing
114	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent	BC ENV (E.Rainy)		Jul 22, 2022	2	Follow Up		No	Please provide the BAT report for the Membrane WTP, or otherwise indicate where in the application this report is located. Similarly, please provide the BAT report for the Metals WTP. For both, please indicate where the QP qualifications are listed for the authors of these reports.	Please see attached "R2_BC ENV_Comment ID 114.pdf" Additionally, Section 5.6.3 in Chapter 5 (Modelling, Mitigation and Discharges) does also include a BAT for both metals WTP and Membrane WTP Furthermore, two memos, by the water treatment plant designers, will be provided that presents additional details on the costing of alternative technologies in alignment with ENV's BAT factsheet. One of the memos will be provided by Aug 16th but the other will be provided from BQE on Aug 26th		BC ENV (E.Rainy)	BQE		GM	GM	Ready for Submission	GM; July 27	Ready for Publishing
114	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent	BC ENV (E.Rainy)		Aug 25, 2022	3	Follow Up		No	Awaiting response from BW Gold	Please see attachment "R3_ENV Comment ID 114.pdf"		BC ENV (E.Rainy)	BQE		V. Sundar	GM	Ready for Submission	GM; Sept 7	Ready for Publishing

115	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please provide further rationale for how the criteria were weighted in relation to relevancy to the project.	The criteria weight provides a number expressing the relevance/priority of the criteria sub-categories within the Project. A numerical scale spanning from 1 to 3 was developed at the beginning of the assessment for criteria weighting. This scale provided a quantitative means of prioritizing criteria sub-categories, with “1” being the least relevant to the Project and “3” being the most relevant. For example, Effectiveness within the Technical Factors was assigned a value of “2” because discharge limits are very strict, while Scalability was assigned “1” because it is not expected that a Water Treatment Plant (WTP) train will need to be scaled up or down (this refers to the ability of scaling each individual WTP train. It is not related to the planned staged installation of multiple trains, which is inherent to the design). As another example, under the Environmental Factors, Energy was assigned a value of “1” because power is readily available on-site, whereas Waste Management is a concern and therefore has been classified as “3” for criteria weight.		BC ENV (E.Rainy)	ERM	McCue	Tonia	RT	Ready for Submission	GM; June 15	Ready for Publishing
116	Joint MA/EMA Permits Application Chapter 5, Section 5.6.4.3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Table 5.6-5 lists both Inlet Surge Ponds for the Metals WTP at a volume of 4600 m3, however the site-wide water balance model (Section 5.3.3.8) assumes Ponds 1 and 2 will be 4600 m2 and 4400 m3, respectively. Please confirm the correct proposed volumes for each of the Metals WTP Inlet Surge Ponds.	Table 5.6-5 incorrectly stated the Pond 2 Volume. The correct volumes are Pond 1 at 4600 m^2 and Pond 2 at 4400 m^2. The volumes were correctly stated in Appendix 5-G and were provided as the volume assumptions in both the water balance and water quality model predictions.		BC ENV (E.Rainy)	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
117	Joint MA/EMA Permits Application Chapter 5, Section 5.6.4.3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please describe how the discrepancy in volume assumptions for the Metals WTP Inlet Surge Ponds will affect the water balance/water quality model predictions in terms of discharge and receiving environment.	Please see the response to Comment 116. There is no discrepancy in volume assumptions for the Metals WTP Inlet Surge Ponds in either the water balance nor water quality model predictions.		BC ENV (E.Rainy)	ERM		Tonia	RT	Ready for Submission	AT, June 08	Ready for Publishing
118	Joint MA/EMA Permits Application Chapter 5, Section 5.6.4.3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Table 5.6-4 summarizes the Metals WTP Installation Plan, which shows that treatment is expected to continue from Years 18 to 23. However, it does not appear that the site-wide water balance and/or water quality assume the benefit of metals treatment during this period (Figure 5.3-7). Please explain this discrepancy.	Table 5.6-4 is outdated. Treating water at the Metals WTP is not part of the proposed water management strategy after Year 18. All streams of water that received treatment at the Metals WTP in earlier years of Operations are directed elsewhere starting in Year 18. Water from the Upper Waste Stockpile and Open Pit contribute to pit filling. Water from the Lower Waste Stockpile is directed to TSF C.		BC ENV (E.Rainy)	Lorax	KP	Meghan, Cindy	GM	Ready for Submission	GM; June 15	Ready for Publishing
119	Joint MA/EMA Permits Application Chapter 5, Section 5.6.4.3	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please comment on how the discrepancy of duration of operating the Metals WTP assumed in the water balance/water quality model will affect the model predictions in terms of implications to the discharge and receiving environment.	The volume for Pond 2 is a typo in Table 5.6-5. Please refer to Table 2.1-3 of the original WTP Detailed Design Report in Appendix 5-G. The table indicates Pond 1 and Pond 2 have volumes of 4,600 and 4,400 m3, respectively, consistent with the assumption in the Water Balance Model. The pond volumes included in the water balance are correct and there is no implication to the discharge or the receiving environment.		BC ENV (E.Rainy)	Lorax	KP	Meghan, Cindy	GM	Ready for Submission	GM; June 15	Ready for Publishing
120	Joint MA/EMA Permits Application Chapter 5, Section 5.8	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please provide proposed maximum discharge flow rate for each of the sediment control ponds that corresponds to the proposed discharge limits provided in the application (i.e.., TSF Stage 1 SCP, Downstream Aggregate Borrow Area SCP, Camp Site SCP and Plant Site SCP)	The maximum discharge flow rates for each sediment control pond is as follows: •Stage 1 SCP: 91,000 m3/mo •Downstream Aggregate Borrow Area SCP: 31,400 m3/mo •Camp Site SCP: 19,000 m3/mo •Plant Site SCP: 14,600 m3/mo For updated Sediment Control Ponds (SCP) discharge locations, please see the attachment "R1_BC ENV_Effluent_Comment IDs 120,122,139,150,151,152.pdf"		BC ENV (E.Rainy)	KP		Jordan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing

121	Joint MA/EMA Permits Application Chapter 5, Section 5.8	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	The proposed maximum discharge rate from the FWR is listed as up to 1.68 m3/s, however the discharge factor form submitted with the EMA final application forms lists a proposed maximum discharge rate of 33.95 m3/s (88,000,000 m3/month). Please clarify the proposed maximum discharge flow rate for Freshwater Reservoir that corresponds to the proposed maximum concentration discharge limits in Table 5.8-4.	The discharge rate of 1.68 m3/s only considers the conveyance capacity of the FWR discharge pipes. The 88,000,000 m3/mo listed on the discharge factor form submitted with the EMA final application is a typo that includes an extra "0". The (correct) maximum discharge from the FWR is estimated at 8,800,000 m3/mo (3.3 m3/s) based on water balance modelling.		BC ENV (E.Rainy)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
121	Joint MA/EMA Permits Application Chapter 5, Section 5.8	Effluent	BC ENV (E.Rainy)		Jul 22, 2022	2	Follow Up		No	Appendix 3-O, Section 3.6.3 states "two sets of FWR outlet works (a surface level outlet and low level outlet) consist of three identical pipes, each sized to individually provide the largest IFN of 0.56 m3/s, for a combined total of 1.68 m3/s." Please clarify if this means the total capacity of the FWR outlets (not including the overflow spillway) is a total of 3.36 m3/s (6 x 0.56 m3/s), which approximately equals the stated maximum discharge capacity estimated by the water balance model (3.3 m3/s)?	There are three outlet pipes from the reservoir. Each outlet pipe is designed to discharge up to 0.56 m3/s with a water surface elevation in the reservoir of 1,154.5 meters above sea level (masl), and the combined total design discharge from the FWR piped outlets is 1.68 m3/s at that pond elevation. The FWR outlets are capable of discharging up to approximately 6 m3/s at the maximum normal water surface elevation of 1,166 masl defined by the spillway invert. The discharge from the FWR spillway would be in addition to the discharge through the piped outlets. The maximum discharge from the FWR predicted with the water balance model of 3.3 m3/s could be discharged through the piped outlets or by a combination of the piped outlets and discharge via the spillway, depending on the water surface elevation in the reservoir and how the piped outlets are operated. For reference, design details of the low-level and surface level outlets are shown on Drawings C4310 to C4312 in Appendix D of Appendix 3-O (Water Management Structures Detailed Design Report) of the Application.		BC ENV (E.Rainy)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
122	Joint MA/EMA Permits Application Appendix 5-B, Table E1.1.	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	In a format similar to Table E.1.1, please provide the base case model monthly flow discharge volumes for the TSF Spillway, Water Management Pond and all Sediment Control Ponds (i.e., TSF Stage 1 SCP, Downstream Aggregate Borrow Area SCP, Camp Site SCP and Plant Site SCP).	Please see attachment "R1_BC ENV Effluent Comment IDs 122 123.pdf". For updated Sediment Control Ponds (SCP) discharge locations, please see the attachment "R1_BC ENV_Effluent_Comment IDs 120,122,139,150,151,152.pdf"		BC ENV (E.Rainy)	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
123	Joint MA/EMA Permits Application Appendix 5-B, Table E5.2	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	The losses shown in this table for Years 50, 75 and 100 only add up to 5 Mm3/year, however the total losses are shown as 6.1 Mm3/year. Is there an additional loss from the TSF C that is not accounted for in this summary table? Given that the inputs during these years are greater than the losses, one would assume that there would have to be more overflow via the closure spillway to the receiving environment, which is a concern to ENV given the current base case predicted water quality exceedances of BC water quality guidelines in post-closure.	Please see attachment "R1_BC ENV Effluent Comment IDs 122 123.pdf".		BC ENV (E.Rainy)	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
124	Joint MA/EMA Permits Application Appendix 5-D, Section 4.2	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please provide a table which shows a comparison of the base case water quality model results (95th percentile values of VCC model) for the WMP and FWR to the Federal Metal and Diamond Mine Effluent Regulations maximum authorized concentrations. Sections 4.2.6 and 4.2.7 indicate that this internal screening was completed already however the results could not be located in this report.	Please refer to attachment "R1_ENV Comment IDs 124, 127.pdf".		BC ENV (E.Rainy)	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
125	Joint MA/EMA Permits Application Appendix 5-D, Section 4.3.2	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	ENV would like to understand the source of water discharged to Davidson Creek during closure which results in exceedances of the short and long-term BCWQGs? For example, Section 4.3.2.5 notes that exceedances in post-closure for dissolved cadmium are due to TSF C pond overflow via the spillway, however the TSF spillway is not being utilized in closure.	Please refer to attachment "R1_ENV Comment IDs 125, 128 and 129.pdf".		BC ENV (E.Rainy)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
125	Joint MA/EMA Permits Application Appendix 5-D, Section 4.3.2	Effluent	BC ENV (E.Rainy)		Jul 22, 2022	2	Follow Up		No	Based on the recently updated water balance model for closure/post-closure (v13e), does the overburden seepage pathway still report to the WMP during these mine phases, i.e., have any changes to the model resulted in different water quality predictions in Davidson Creek? Please provide updated figures that show the water quality predictions at WQ28 for D-Cd, T-Zn, T-Sb (Figure 2-1) and T-Zn loading plots for WMP (Figure 2-2) to confirm.	Please see attachment "R2_ENV Comment ID 125.pdf"		BC ENV (E.Rainy)	Lorax				Ready for Submission	GM; Aug 11	Ready for Publishing
126	Joint MA/EMA Permits Application Appendix 5-D, Section 4.3.2	Effluent	BC ENV (E.Rainy)		Aug 19, 2022	2	Follow Up		No	Awaiting response to EMLI comment 417 submitted August 5, 2022.	This comment is acknowledged.		BC ENV (E.Rainy)	Lorax	KP	Meghan/Cindy		Ready for Submission	GM; Aug 30	Ready for Publishing
126	Joint MA/EMA Permits Application Appendix 5-D, Section 4.3.2	Effluent	BC ENV (E.Rainy)		Aug 25, 2022	3	Follow Up		No	Submitted with ENV Round 2b comments: Awaiting response to EMLI comment 417 submitted August 5, 2022.	Please refer to attachment "R2_EMLI_Geoscience_Comment ID 417.pdf" submitted August 25, 2022, which addresses items a) through f) , h), and i) of Round 2 Comment 417. It is noted that responses to items g) and j) of Comment 417 were under development at the time of writing. Please refer to responses provided to corresponding Round 2b comments for further detail.		BC ENV (E.Rainy)	Lorax		Meghan		Ready for Submission	GM; Sept 16	Ready for Publishing

126	Joint MA/EMA Permits Application Appendix 5-D, Section 4.3.2	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	ENV has concerns regarding the discharge scenarios presented for closure and post-closure which represents unmitigated discharge to Davidson Creek. These discharge scenarios are shown to result in consistent predicted exceedances of BC water quality guidelines for protection of aquatic life (BCWQGs), which increases the likelihood of adverse effects downstream. More specifically, exceedances of short-term maximum (acute) BCWQGs for unmitigated effluent discharge does not align with ENV policy and more information is required as part of this application.	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022).		BC ENV (E.Rainy)	Lorax	KP	Meghan/Cindy	GM	Ready for Submission	GM; June 23	Ready for Publishing
127	Joint MA/EMA Permits Application Appendix 5-D, Section 4.4	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please provide a table which summarizes a comparison of the Scenario 1 and Scenario 4 model inputs in terms of predictions for total seepage, unrecoverable seepage and estimated travel time to discharge location for the TSFs, Upper Waste Stockpile, Lower Waste Stockpile and LGO stockpile.	Please refer to attachment "R1_ENV Comment IDs 124, 127.pdf".		BC ENV (E.Rainy)	Lorax	KP	Meghan, Cindy	GM	Ready for Submission	GM; June 28	Ready for Publishing
127	Joint MA/EMA Permits Application Appendix 5-D, Section 4.4	Effluent	BC ENV (E.Rainy)		Jul 22, 2022	2	Follow Up		No	The response only partially addressed this comment. For clarity, I am seeking the predicted seepage concentrations and volumes from these mine facilities prior to reaching the receiving environment. Please provide the predicted water volumes and water quality concentrations of the total seepage and unrecoverable seepage estimated from the TSFs, Upper Waste Stockpile, Lower Waste Stockpile and LGO stockpile based on the recently updated water balance/water quality model (WB v13e, average climate with base case source terms) from construction to post-closure: Scenario 1 (revised base case) compared to the requested sensitivity scenario in Comment 130 (upper bound seepage rates for TSFs only).	Please see attachment "R2_ENV Comment ID 127.pdf"		BC ENV (E.Rainy)	Lorax	KP			Ready for Submission	GM; Aug 11	Ready for Publishing
128	Joint MA/EMA Permits Application Appendix 5-D, Section 4.4	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	Please provide similar plots to Figure 4-36 based on Sensitivity Scenario 4 to Average Climate Base Case results for TSF pond C, TSF pond D, Environmental Control Dam (ECD) and FWR. ENV would like to understand the impact of the increased seepage rates from the TSF to these facilities as well.	Please refer to attachment "R1_ENV Comment IDs 125, 128 and 129.pdf".		BC ENV (E.Rainy)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
129	Joint MA/EMA Permits Application Appendix 5-D, Section 4.4	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	It is not clear from the sensitivity seepage scenario results and interpretation why the LGO stockpile was assumed to have the greatest influence on the predicted water quality at the WMP and WQ28, given that Sensitivity Scenario 4 assessed the potential upper bound seepage from the TSFs, Upper Waste Stockpile, and Lower Waste Stockpile as well. Please expand on this interpretation.	Please refer to attachment "R1_ENV Comment IDs 125, 128 and 129.pdf".		BC ENV (E.Rainy)	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
130	Joint MA/EMA Permits Application Appendix 5-D, Section 4.4	Effluent	BC ENV (E.Rainy)		Jun 01, 2022	1	New		No	ENV has noted relatively high uncertainty in the modelled seepage rates from TSF and has recommended a more conservative approach using upper bound seepage rates to assess impacts to the environment. Therefore, please complete an additional seepage sensitivity scenario that evaluates the upper bound seepage estimates for both total and unrecoverable seepage from the TSF. Please illustrate the predicted water quality results in figures for the TSF C pond, TSF D pond, ECD, FWR and WQ28 compared to Scenario 1. ENV would like to understand if the upper bound seepage rates result in predicted exceedances of the proposed effluent permits limits at the FWR under this more conservative scenario during construction and operations.	BW Gold acknowledges the noted uncertainty in TSF seepage and potential changes to predicted receiving environment water quality and quantity. This sensitivity will be conducted to address Comments 130, 142, and 417. The predicted water quality results of model output will be presented in a memorandum provided to MRC on or before July 20, 2022.		BC ENV (E.Rainy)	Lorax	KP	Meghan, Cindy	GM	Ready for Submission	TD, 15-Jun-22	Ready for Publishing
130	Joint MA/EMA Permits Application Appendix 5-D, Section 4.4	Effluent	BC ENV (E.Rainy)		Aug 19, 2022	2	Follow Up		No	It is noted that in Table 3-4 (Memo "R1_ENV Comment ID 130 and 417_FINAL_Vs.pdf") for the FWR results the frequency of exceedances of WQG-AL BC LT for D-Cd during operations is 0% for both Upper Seepage Sensitivity and Base Case (v13e). However, Figure 3-2 (upper plot) clearly shows exceedances of the WQG-AL BC LT during operations for both model cases (at least 4 occurrences). Please explain this discrepancy and provide a revised Table 3-4.	Please refer to attachment "R2_ENV Comment ID 130.pdf"		BC ENV (E.Rainy)	Lorax	KP	Meghan, Cindy		Ready for Submission	GM; Aug 30	Ready for Publishing
131	Appendix 2-B 2020 Hydrometeorology Report 2.2 Air Temperature	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Are the titles for Figure 2.5 and Figure 2.6 incorrect? The text indicates that these figures show the air temperature correlation between Vanderhoof (ECCC site 1098D90) and site climate stations; however, the figures titles reference other regional climate stations. Please confirm these figures show the relationship between site and Vanderhoof air temperature data.	Figure 2.5 and Figure 2.6 were mislabeled. The axis titles on the figures are correct.		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
132	Appendix 2-B 2020 Hydrometeorology Report & Appendix 5-C Baseline Watershed Model Report 2.6 Evaporation	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The evaporation characterization in the hydrometeorology report states that "the Thornthwaite model has been found to typically underestimate PET in semi-arid climates, such as that at Blackwater, and therefore the values likely represent a lower bound of PET estimates for site". This characterization is in conflict with the decision to use the Thornthwaite model to estimate PET within the baseline and LOM watershed models. Please indicate why the Thornthwaite model was deemed appropriate for the watershed model, but wasn't included in the site estimate of PET in the hydrometeorology characterization, which settled on the average of the estimates from the Hargreaves-Samani and the Penman-Monteith models. I understand that the two selected models predict PET in the winter months which was been interpreted as a potential sublimation estimate; however, annual sublimation (63 mm for Blackwater High) does not account for the full difference between the estimated PET for site (554 mm for Blackwater High) and the estimate from the Thornthwaite model	Please see attachment "R1_BC ENV Effluent Comment IDs 132-137.pdf".		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
133	Appendix 2-B 2020 Hydrometeorology Report 2.7.3 Wet and Dry Year Precipitation	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The text indicates a normal distribution was selected to characterize the range of probable precipitation conditions at site. It is somewhat unusual to see the normal distribution selected to predict extremes for water resources dataset. I note elsewhere in this report that the Gumbel, GEV and Log Pearson Type III distributions were selected to character the range of snowpack, monthly discharge and 7-day low flows, respectively. What statistical tests were performed to confirm that the annual precipitation dataset are normally distributed? If another distribution is selected, is there a notable difference in the predicted wet and dry values?	Please see attachment "R1_BC ENV Effluent Comment IDs 132-137.pdf".		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing

134	Appendix 2-B 2020 Hydrometeorology Report 2.7.3 Wet and Dry Year Precipitation	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Please provide monthly wet and dry precipitation estimates for Blackwater High with a short description of how the estimates were developed.	Please see attachment "R1_BC ENV Effluent Comment IDs 132-137.pdf".		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
135	Appendix 2-B 2020 Hydrometeorology Report 3.2.2 Frequency Paired Regression and 3.2.3 Winter Runoff	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Please provide figures of all seasonal, monthly or paired station frequency pairing regression relationships used the develop the long-term synthetic records. This should include winter specific relationships as discussed in Section 3.2.3.	Please see attachment "R1_BC ENV Effluent Comment IDs 132-137.pdf".		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
136	Appendix 2-B 2020 Hydrometeorology Report 3.2.4 Long-term Discharge and Unit Runoff	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Please provide model fit statistics (NSE or similar) for the calibration and validation periods for the synthetic daily flow records.	Please see attachment "R1_BC ENV Effluent Comment IDs 132-137.pdf".		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
137	Appendix 2-B 2020 Hydrometeorology Report 3.3.2 Wet and Dry Return Period Flows	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The mean annual results presented in Table 3.5 appear to be mean values for a year consisting of 12 months each at a given return period. For example, the mean annual flow presented for the 50 year return period appears to be the average of 50 year dry months (Jan through Dec). Typically, annual return period values are based on a distribution fit to an annual series and would be less extreme than the values presented. Please update the table to provide annual wet and dry return period flows.	Please see attachment "R1_BC ENV Effluent Comment IDs 132-137.pdf".		BC ENV (Anna Ackerman)	KP		Jaime	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
138	Appendix 5-B LOM Water Balance Model 4.4.2 TSF Seepage	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The text references a predicted advective travel time for seepage from the TSF to reach Davidson Creek (>100 years). Were travel times predicted by the numerical groundwater model used in any way in the LOM watershed model?	All predicted seepage pathways were included in the LOM WBM, regardless of the simulated travel time. As discussed in the Water Quality Model Report (Appendix 5-D), seepage pathways with a median travel time less than 125 years were assigned seepage source terms. Seepage pathways with a median travel time greater than 125 years were not assigned source terms in the water quality model (they were considered inert).		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
139	Appendix 5-B LOM Water Balance Model 4.6 Waste	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Sections 4.61 and 4.62 describe runoff, toe discharge and seepage from the stockpile footprints contributing to sediment control ponds. Are these SCPs designed to settle sediment as per ENV guidance, like the SCPs that will discharge to the environment (e.g. Camp SCP) or are these SCPs more like collection ponds as this contact water is transferred and often treated (depending on mine phase)?	These are collection ponds where contact water is transferred via pump systems for treatment. For updated Sediment Control Ponds (SCP) discharge locations, please see the attachment "R1_BC ENV_Effluent_Comment IDs 120,122,139,150,151,152.pdf"		BC ENV (Anna Ackerman)	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
140	Appendix 5-B LOM Water Balance Model 4.10 Tatelkuz Lake	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	I'm not sure I understand how streamflow in Chedakuz Creek was modeled. Are baseline streamflow at H5 and 15-CC represented as mean monthly flows in all model scenarios, including the variable climate model and the climate change model? For example, does "H5 Baseline" in the equation for H5 flows represent the same August flow for all years? Is the "Change in 1-661 flows" the change from the 17-year baseline period in the LOM watershed model? Please confirm or provide additional information	Baseline streamflows at H5 and 15-CC are represented as mean monthly flows in the base case average climate water balance model (i.e..., January flows are the same for all years). Baseline streamflow at H5 and 15-CC are represented as monthly average flows in the Variable Climate Case (VCC) water balance model (i.e..., each month of the historic series is unique) and each monthly flow occurs in the VCC Model consistent with the climate month it is associated with.		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing

141	Appendix 5-B LOM Water Balance Model 4.10 Tatelkuz Lake and Chedakuz Creek Flows	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Does this approach to modeling streamflow at H5 and 15-CC match measured data at these locations for the baseline period? If yes, please describe the comparison using figures or tables. If no, please explain why not.	Baseline flows at H5 and 15-CC are represented using the long-term synthetic series of flows at the respective hydrology stations (15-CC is represented using the synthetic flow series for the "L1-Outlet" station). A comparison between the measured streamflows and the synthetic streamflow series at the two stations is provided on Figures A.9 and A.19 in the 2020 Hydrometeorology Report in Appendix 2-B of the Application.		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
142	Appendix 5-B LOM Water Balance Model 7.0 Seepage Sensitivity Analysis	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	ENV has noted relatively high uncertainty in the modelled seepage rates from TSF and has recommended a more conservative approach using upper bound seepage rates to assess impacts to the environment. Therefore, please complete an additional seepage sensitivity scenario that evaluates the upper bound seepage estimates for both total and unrecoverable seepage from the TSF (only). Please illustrate the predicted water quantity results using variable climate in figures for the TSF C pond (like Figure 6.19), TSF D pond (Figure 6.20), Metals WTP capacity (Figure 6.24), WMP (Figure 6.28, 6.29) and FWR (Figure 6.31, 6.32, 6.36). I would like to compare the predicted water management results under the upper bound TSF seepage rate scenario during construction and operations to similar figures developed for the base seepage case.	BW Gold acknowledges the noted uncertainty in TSF seepage and potential changes to predicted receiving environment water quality and quantity. This sensitivity will be conducted to address Comments 130, 142, and 417. The predicted water quality results of model output will be presented in a memorandum provided to MRC on or before July 20, 2022. Please see attachment "R1_ENV_Comment ID 147.pdf"		BC ENV (Anna Ackerman)	KP	Lorax	Cindy, Jen	AT/KP	Ready for Submission	TD, 15-Jun-22	Ready for Publishing
142	Appendix 5-B LOM Water Balance Model 7.0 Seepage Sensitivity Analysis	Effluent	BC ENV (Anna Ackerman)		Aug 19, 2022	2	Follow Up		No	Awaiting response to EMLI comment for IR 417 a) (August 5, 2022) and hopes the QP will provide schematics similar to Appendix D2 of Appendix 5-B showing the changes in water management associated with the Upper Bound TSF Seepage Scenario	Please see attachment "R2 BC ENVIEffluent Comment ID 142.pdf".		BC ENV (Anna Ackerman)	KP	Lorax	Cindy, Jen		Ready for Submission	GM; Aug 31	Ready for Publishing
143	Appendix 5-B LOM Water Balance Model 9.3 Gaps and Uncertainties	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Under the section about freshwater needs to meet IFN in Davidson Creek, the last bullet states "model results suggest there is a 15-25% likelihood that the FWSS (or alternative source) will be needed to increase streamflow to meet IFN during any non-freshet month during the first five years of Operations". The text goes on to indicate that the FWSS isn't slated to be constructed and operational until Year 6 and no other source of make-up water has been explicitly identified. My understanding is that the water balance model logic allows the IFN to be met in all scenarios by assuming the FWSS is constructed and operational in Year -1. This logic allows the modelling team to calculate the likelihood the FWSS is needed, as indicated above. Based on my reading of Section 6.3.2 Mill Water Sources, there are no modelled scenarios where make-up water is needed for the process water before Year 11. However, all water quality results for the FWR and W28 assume that the IFN is met under all modeled climate conditions for Years 1 to 5, which doesn't align with the proposed mine plan. Please provide water quality predictions for FWR and W28 for the first five years from a scenario where the model logic is changed to match the mine plan - for Years 1-5, in dry conditions, no additional source of water is used to supplement flows and IFN targets are not met. Please provide these water quality results for two seepage cases: the base seepage case and upper bound seepage case from the TSF (only) as described in the request above.	This sensitivity will be conducted and include the two seepage cases identified. The results of model output will be presented in a memorandum provided to MRC on or before July 20, 2022. Update: Please see attachment "R1_ENV Comment ID 143.pdf"		BC ENV (Anna Ackerman)	KP	Lorax	Cindy, Jen	AT/KP	Ready for Submission	TD, 15-Jun-22	Ready for Publishing
144	Appendix 5-B LOM Water Balance Model Appendix B Baseline Flow Comparison	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Please provide the baseline flow comparison for 1-DC or indicate why it cannot be provided.	Please see attachment "R1_BC ENV Effluent Comment IDs 144 145.pdf".		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing
145	Appendix 5-B LOM Water Balance Model Appendix D Detailed Schematics	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Many of the flow paths on these figures are numbered. Is there a missing table that provides additional flow path information based on these numbers? If so, please provide.	Please see attachment "R1_BC ENV Effluent Comment IDs 144 145.pdf".		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing

146	Appendix 5-C 2020 Baseline Watershed Model 2.3.1 Temperature	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The baseline watershed model text indicates that a synthetic air temperature record was developed from a relationship based on concurrent daily air temperature data at Blackwater High and Vanderhoof. The hydrometeorology report states that a synthetic air temperature record was developed using concurrent mean monthly data. The mean monthly values presented in Appendix A.1 (Appendix 5-C) and Table 2.2 (Appendix 2-B) are very similar but not the same. Please confirm if the synthetic dataset developed as described in the hydrometeorology report was used in the baseline watershed model, or if there are two similar synthetic air temperature records for Blackwater High.	The mean monthly temperature and precipitation values developed for the Hydrometeorology Report were used for the Baseline Watershed model. The mean monthly values presented in the two references differ slightly due to the range of dates included in the calculation of the mean. The mean monthly temperature and precipitation values presented in the Baseline Watershed Model Report (Tables A.1 and Table A.2 of Appendix A of Appendix 5-B) were calculated over the period of October 1980 through October 2020. The mean monthly temperature and precipitation values presented in the Hydrometeorology Report (Tables 2.2 and Table 2.9 of Appendix 2-B) were calculated over the period of January 1981 through November 2020.		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
147	Appendix 5-C 2020 Baseline Watershed Model 2.3.1 Temperature	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The baseline watershed model text indicates a summer and winter lapse rate were used to calibrate the model. The hydrometeorology report provides a relationship to estimate air temperature at Blackwater Low using data from Blackwater High (Figure 2.2 and surround text in Appendix 2-B). These data could be used to develop a site specific lapse rate. Was this relationship considered during watershed model calibration?	Yes, data from Blackwater High and Blackwater Low climate stations were considered when developing the lapse rate in the baseline watershed model. As discussed in Section 2.3.1 of the Baseline Watershed Model Report (Appendix A of Appendix 5-B), the temperature data collected from the stations indicates the lapse rate is seasonally dependent, and suggests an approximate decrease in temperature of 0.6°C per 100 m increase in elevation in the winter and a lesser decrease in temperature in the winter months, attributed to inversions. A lapse rate of 6°C/1,000 m of elevation is assigned to the baseline watershed model for the summer and shoulder months (April to October) and a lapse rate of 5°C/1,000 m was assigned during winter months.		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
148	Appendix 5-C 2020 Baseline Watershed Model 2.3.2	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The mean monthly precipitation values for Blackwater High presented in Appendix A.2 (Appendix 5-C) and Table 2.9 (Appendix 2-B) are very similar but are not the same (October, November and December are different). Please confirm if the synthetic dataset developed as described in the hydrometeorology report was used in the baseline watershed model, or if there are two similar synthetic precipitation records for Blackwater High.	Same response as Comment 146: The mean monthly temperature and precipitation values developed for the Hydrometeorology Report were used for the Baseline Watershed model. The mean monthly values presented in the two references differ slightly due to the range of dates included in the calculation of the mean. The mean monthly temperature and precipitation values presented in the Baseline Watershed Model Report (Tables A.1 and Table A.2 of Appendix A of Appendix 5-B) were calculated over the period of October 1980		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
149	Appendix 5-C 2020 Baseline Watershed Model 5.0 Long-term Streamflow Estimates	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	The baseline watershed model was calibrated and validated to relatively short-term measured streamflow datasets from site. Were the long-term synthetic streamflow records used to calibrate or validate the long-term estimates provided in Appendix F? If yes, please describe the comparison using figures or tables. If no, please provide a rationale.	Please see attachment "R1_BC ENV Effluent Comment ID 149.pdf".		BC ENV (Anna Ackerman)	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
150	Chapter 5 Modelling, Mitigation and Discharges 5.9.2 Sediment Control Ponds	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Based on the proposed permit limits, ENV notes that the applicant is expecting to rely on dilution to meet BC WQGs downstream of the SCPs. My colleagues and I have asked some preliminary questions to clarify the proposed discharges and we will likely require additional information on this topic in subsequent rounds of review. [Comment]	BW Gold acknowledges this comment. For updated Sediment Control Ponds (SCP) discharge locations, please see the attachment "R1_BC ENV_Effluent_Comment IDs 120,122,139,150,151,152.pdf"		BC ENV (Anna Ackerman)	Lorax		Meghan	GM	Ready for Submission	GM; June 15	Ready for Publishing

151	Chapter 5 Modelling, Mitigation and Discharges 5.9.2.2 Plant Site Sediment Control Pond	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Please indicate where on Creek 505659 the Plant Site SCP is anticipated to discharge into the creek. Figure 5.9-2 shows the proposed location of the Plant Site SCP but does not indicate the discharge location during Construction. I understand from Section 5.8.3.2 that this pond has not been designed. I'm not certain what "subsequent regulatory application" will provide these designs as I understand the applicant is asking for regulatory approval to discharge from this pond in this current application. ENV needs to understand where this discharge is proposed in order to consider permitting this discharge.	The Plant Site SCP will not have a discharge to surface water during any phase of the Project. During Construction phase, the Plant Site SCP will continue discharging to ground via the rapid infiltration basins (as already permitted for Early Works), with expansion of the rapid infiltration basins if needed. During Operations, water from the Plant Site SCP will either be used for mining activities or transferred to the Water Management Pond. For updated Sediment Control Ponds (SCP) discharge locations, please see the attachment "R1_BC ENV_Effluent_Comment IDs 120,122,139,150,151,152.pdf"		BC ENV (Anna Ackerman)	BWG	ERM/KP/Lorax	Travis	TD	Ready for Submission	TD, Jun 28	Ready for Publishing
152	Chapter 5 Modelling, Mitigation and Discharges 5.9.2.4 Camp Site Sediment Control Pond	Effluent	BC ENV (Anna Ackerman)		Jun 01, 2022	1	New		No	Please indicate at where on Creek 505659 the Camp Site SCP is anticipated to discharge into the creek. Figure 5.9-2 shows the proposed location of the Camp Site SCP but does not indicate the discharge location. Further it appears from this figure that the Camp Site SCP is closer to an unnamed tributary to the Creek 661 mainstem. A similar impression is made by Figure 2.7-1 in Chapter 2. Again, I understand from Section 5.8.3.4 that this pond has not been designed; however, ENV needs to understand where this discharge is proposed.	The camp site SCP is planned to discharge to 378,545 E, 5,896,015 N in Creek 146920. For updated Sediment Control Ponds (SCP) discharge locations, please see the attachment "R1_BC ENV_Effluent_Comment IDs 120,122,139,150,151,152.pdf"		BC ENV (Anna Ackerman)	BWG	ERM/KP/Lorax	Travis	TD	Ready for Submission	TD, Jun 23	Ready for Publishing
153	Appendix 2-J	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Comment	No	The Groundwater Baseline Report (Appendix 2-J) has assembled hydrogeological information from exploration boreholes, test pits, piezometers, and monitoring wells over several years of site investigations and describes hydrogeological aspects needed to conceptualize groundwater conditions and interactions with neighbouring surface waters. However, as noted in several of the Application documents, there is currently incomplete understanding of surficial sediments within Davidson Creek valley, specifically as it relates to seepage losses and potential transport pathways from the Tailings Storage Facility (TSF) to the downstream environment.	Thank you for your comment. As discussed in the 2020 Groundwater Baseline Report (Appendix 2-J of the Application), the extent and thickness of the surficial deposits along Davidson Creek valley will be assessed during construction of the embankments. A low permeability core zone within each Main Dam will extend into the lower permeability subgrade material at depth with the excavation of cut-off trenches.		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
154	Appendix 3-L	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	Application documents (i.e.. the Dam Site Characterization Report, Appendix 3-L) recommend additional investigations to progressively refine the geological model near and downstream of the TSFs. The recommended investigations should be designed such that they improve hydrogeological understanding to support future seepage modelling and groundwater interception (if required). To that end, please describe the specific groundwater investigation efforts (installation and testing of large diameter pumping wells, for example) that will provide additional information on the extent and connectivity of permeable sediments and groundwater interception	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 154 155 159 169.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
155	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The conceptual hydrogeological model described in the Numerical Groundwater Modelling Report (Appendix 5-F) is limited to current (greenfield) site conditions. Conceptualising the influence of proposed mining activities (i.e.. open pit dewatering, lateral and vertical seepage from the TSFs, etc...) on groundwater flow is typically assessed using analytical equations before developing a numerical model. Please describe the general influence of proposed mining on groundwater flow in the vicinity of the project and how analytical results (seepage from the TSFs and pit inflows) compare to numerical model results during mine operations.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 154 155 159 169.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
156	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	Please provide information on the process to develop/interpolate hydrostratigraphic surfaces from observed borehole data, the spatial distribution of control points for each surface, and identify where surfaces may have increased uncertainty.	Please see attachment "R1_BC ENV Hydrogeology Comment ID 156.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission		Ready for Publishing

157	Appendix 2-J	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Information Requirement	No	The Groundwater Baseline Report describes several areas where loss of drill water occurred when higher permeability zones, such as faults, were intercepted within Davidson Creek valley. Faults, however, are only considered for the deposit area and rationale for their exclusion elsewhere is needed. Please provide rationale why faults were not considered below the TSF and the Davidson Creek valley (and excluded from the sensitivity analysis).	Based on the available information, faults in the Davidson Creek valley are not noted to influence groundwater flow. Details of each fault zone intercepted during drilling is summarized in Table 2.2 of the Groundwater Baseline Report (Appendix 2-J). Drillhole circulation losses were not noted to have occurred within fault zones while drilling in the TSF area. Hydraulic conductivity test results completed in possible fault zones encountered in drillholes yielded results in the typical range of values observed for tests completed in bedrock; with the exception of one fault zone encountered in drillhole GT13-20 which yielded an elevated hydraulic conductivity in a response test (2E-6 m/s) and packer test that may be related to the fault (9E-7 m/s). Drillhole GT13-20 is located near the TSF D south abutment. A standpipe piezometer installed in the fault at GT13-20 reports a water level that is only 5 mbgs; the relatively shallow water level does suggests the screen is not installed in a permeable pathway. Even though a fault may consist of broken rock and exhibit permeability at the local scale it may not have hydraulic continuity along its length due to pinch out. Groundwater levels in the Davidson Creek valley were able to be calibrated sufficiently without the		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
158	Appendix 2-J	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Clarification	No	The inferred hydraulic behaviour of faults is not clear. Please provide clarity on whether faults are interpreted to have low or high permeability	As discussed in the response to Comment ID 157, available information for faults encountered in the TSF area does not support that any one particular fault influences groundwater flow. The results of permeability testing together when considered with water level data available in fault zones does not suggest any of the identified faults in the TSF area are conduits for groundwater flow. Faults in the TSF area are therefore interpreted to have lower permeabilities similar to the host bedrock. Available data for faults in the deposit area indicate that faults act as conduits for groundwater flow and as barriers to flow. Faults in the deposit area locally compartmentalize groundwater flow as evidenced by measured water levels that differ by 70 m across a fault located in the southern portion of the deposit. Other available data indicates faults in the deposit area are permeable, such as observations of drill water circulation losses while drilling that were attributed to fault or shear zones. Often however, drillholes advanced in the central portion of the deposit encountered intervals of broken bedrock with higher permeability and it was difficult to attribute the influences of permeability to any single structure or separate from the bulk broken nature of the bedrock. Faults in the deposit area are interpreted to have both high and low permeabilities; faults with low permeability have been interpreted along the north and south boundaries of the deposit and faults with higher permeability have been interpreted in the central portion of the deposit. The higher permeability faults in the central portion of the deposit may not exert much influence on		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
159	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The conceptual hydrogeological model does not describe the potential effects of open pit blasting on local scale hydraulic conductivity. Impacts of blasting and load removal can extend well beyond the pit shell and influence local hydraulic properties of host rock and groundwater flow patterns. Given that the proposed open pit is located near several drainage divides, please describe how the effects of potential pit shell overbreak may influence hydraulic heads, groundwater flow patterns, pit flooding and its post-closure fluxes to the neighbouring drainages.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 154 155 159 169.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
159	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jul 22, 2022	2	New	Information Requirement	No	Thank you for providing the information about the potential effects of the pit shell over-break on groundwater conditions, as well as the numerical groundwater update related to the pit lake/groundwater sink simulations. Given that the pit lake flooding will be accelerated using mine water from several sources, hence the pit will be a major storage facility of mine water, the following is seeking additional clarity and information about the hydrogeological concepts and evaluations related to the potential hydraulic connections between the pit lake water and downslope drainages located east of the proposed pit	Please see attachment "R2_ENV Hydrogeology Comment IDs 159 163.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, Aug 16	Ready for Publishing
160	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	Please provide information on the code selection process and why the selected code was deemed to be best suited to address the objectives.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
161	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	Please provide rationale for assigning larger recharge to competent bedrock than to lacustrine units despite the assigned hydraulic conductivity of lacustrine units being much larger than the assigned hydraulic conductivity of competent bedrock.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

162	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	Drain boundary conditions were used to represent the stream network and gaining vs. losing/neutral stream reaches are presented in a subsequent figure. Drain boundary conditions allow one-directional flow from the subsurface to streams and therefore do not allow flow from streams to the subsurface. It would be prudent to consider the use of general head boundary conditions, stream boundary conditions, river boundary conditions, or the streamflow routing package to allow bi-directional flow between the stream and subsurface. Although drain boundary conditions may be suitable to meet the current objectives of the numerical model, they are not suitable to simulate surface water and groundwater interactions and modification may be required for more detailed future studies. For example, the current configuration of the numerical model only allows pit dewatering to entrain groundwater that would have otherwise discharged to a stream but not pull stream water into the subsurface towards dewatering wells. Similarly, utilizing the unstructured grid capabilities of MODFLOW-USG would allow increased refinement near hydrologic features. Please address these observations and clarify whether the specified boundary conditions adequately represent water interactions.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
163	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The numerical model is missing information and discussion regarding mass balance error. It is not possible to evaluate the model, and therefore its predictive capability, without this information. Please provide a mass balance table summarizing simulated inflows and outflows for the model, each boundary condition, etc... for the baseline, mine operations and closure conditions.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
163	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 30, 2022	2	Follow Up	Information Requirement	No	The provided table is great and shows good mass balance but the reviewer is wondering how the flow that goes into the drain boundary conditions is differentiated between flow to the streams and flow to the open pit. It would be helpful to split those out for each mine stage. Further to the above, it would also be helpful to be able to compare the flow into the streams for each	Please see attachment "R2_ENV Hydrogeology Comment IDs 159 163.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, Aug 16	Ready for Publishing
164	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The calibrated baseline numerical model presents a normalized root mean square error of 3.0% but no other calibration statistics are provided. Please provide additional calibration statistics including minimum residual, maximum residual, mean residual, root mean square error, and the correlation coefficient.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
165	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	It is difficult to assess the adequacy of calibration with the D1 series of figures in Appendix 5-F. It is industry standard to depict hydraulic head targets with both observed and simulated groundwater elevations. Please update the D1 figures (i.e.. magnitude/sign of residuals and their location in relation to boundary conditions).	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

166	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The groundwater model is calibrated to simulated baseflow from a watershed model as secondary calibration targets. The "baseline watershed model was calibrated to four gauging stations located on Davidson Creek and there is a higher confidence in the watershed model baseflow estimates. Simulated baseflows at the outlet of Creek 705 vary by about 50 percent from the watershed model estimates" (Page 39, Appendix 5-F). Please provide rationale for comparing simulated baseflow from the groundwater model to simulated baseflow from the watershed model rather than directly to the observed/analytical baseflow data considering the watershed model appears to be calibrated to only four locations and has discrepancy with observed/analytical data	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
167	Appendix 5-F	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The "model calibration to simulated baseflows is considered suitable for the purpose of the model" (Page 39, Appendix 5-F) but the relative percent difference between the watershed model baseflow and groundwater model baseflow ranges to more than 100% at one station and by more than 10% at the vast majority of stations. Please provide additional information on why this was considered suitable for the purpose of this model considering that simulating baseflow reduction for predictive scenarios is an objective of the study.	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
168	Figure 2.9, Appendix 2-J	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The surficial geology and landform map provided in the Groundwater Baseline Report (Figure 2.9, Appendix 2-J) indicates that the depositional environment at and downstream of the TSF footprint is highly complex. Hydraulically conductive sediments appear to underly large portions of the TSF footprint, which may restrict water retention in the TSF and produce high seepage losses (both lateral and vertical). In contrast, the C series figures in the Numerical Groundwater Modelling Report notably simplify the depositional environment near the TSF. Such simplification raises concerns regarding how well the surficial geology is translated into the numerical model and its predictive capability for seepage analysis. Furthermore, given that the distribution, extent, and continuity of surficial sediments near the TSF are poorly understood, and hence are unlikely to be adequately represented in the numerical model, the modelled seepage rate results may be considerably uncertain. This observation is supported by the model sensitivity analysis, which indicates substantially increased seepage losses	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 160-168.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
169	-	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	QP Response Required	No	The groundwater model indicates high seepage capture efficiency (>90%) by the seepage collection system and only small quantities of unrecoverable seepage are predicted to migrate to the downstream receiving waters. Although the predictions may be supported by particle tracking, in reality, seepage interception ponds are usually much less efficient. Experience from mines in similar topographic and geologic settings suggests that seepage plumes that develop below tailings dams expand beyond downstream interception ponds and reclaim dams. The possibility of larger quantities of seepage bypassing the collection system is further complicated by the current uncertainty in the hydrogeological understanding of the Davidson Creek valley. Accordingly, please describe how the additional geological investigations downslope the TSF footprint will be designed to inform potential groundwater interception measures	Please see attachment "R1_BC ENV Hydrogeology Comment IDs 154 155 159 169.pdf".		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
170	Appendix 9-E	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Clarification	No	The Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E) describes contact water discharge from the toes of both the Upper and Lower Waste Stockpiles. Please clarify whether foundation underdrains will be installed at the base of these facilities to collect infiltrated water and control pore water buildup within the stockpiles.	As discussed in Appendix 3-Y, non-contact water is to be diverted around the facility to natural drainages that flow to the WMP. Surface contact water will be managed in a manner that allows for safe containment and control. NAG waste rock will be selectively placed along the base of the piles to convey infiltrated water and control pore water buildup within the stockpiles. All contact water is to be collected and conveyed by collection channels to a collection pond where flows can be pumped to the Metals WTP influent pond for treatment.		BC ENV (R.Martinka, C. Donnelly)	KP		Cindy	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing

171	Appendix 9-E	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Information Requirement	No	Monitoring groundwater levels near an open pit during its dewatering is commonly used to evaluate potential seepage pathways after closure once a pit lake develops. There is only a single groundwater monitoring location proposed east of the open pit (once MW12-11 is destroyed by the advancing pit). Please comment if a single well installation will be adequate to monitor groundwater levels east of the pit considering it is located near drainage divides and pit shell overbreak may affect groundwater flow patterns.	Water levels surrounding the open pit will be monitored during advancement of open pit mining to collect data to support characterizing the hydrogeology surrounding the open pit. Water levels will be monitored at the following sites surrounding the Open Pit as stated in Section 7.3.4.3 of Appendix 9-E: MW12-03D, DK/MW-05, and GT-A. Water levels will also be monitored in the 18 proposed observation wells planned to be located around the perimeter of the open pit, 10 of which are proposed to be installed in the east sector of the pit. The locations of these observation wells are shown on Figure 6.1 of the Open Pit Slope Design Report in Appendix 3-B. Water levels will continue to be monitored at MW12-04D/S until construction of the Upper Waste Stockpile encroaches on the location of the monitoring wells sometime in or after Year 11.		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
172	-	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Information Requirement	No	The closure plan for the open pit prescribes assisted flooding that may take about 25 years to complete. This may produce long term risks and liabilities for the mine closure, particularly related to the pit lake water quality and its post-flooding discharges to the downstream receiving waters. Please describe potential options and considerations to shorten the flooding time frame and maximize the filling rates (for example, additional water supplied from Tatelkuz Lake).	The water management strategy already includes directing surplus water from the ECD, TSF, and Upper Waste Stockpile to the Open Pit from the end of open pit mining in Year 18 through Closure to assist with pit filling. Directing additional sources of water to the Open Pit could be considered an option if downstream IFN flows can be maintained. Additional sources of water at the Project that could be considered to assist with pit filling include runoff from the Lower Waste Stockpile, water directed to the WMP, and water diverted around the TSF via the North Diversion System.		BC ENV (R.Martinka, C. Donnelly)	KP		Cindy	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
173	-	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Information Requirement	No	The closure plan for the open pit prescribes assisted flooding that may take about 25 years to complete. This may produce long term risks and liabilities for the mine closure, particularly related to the pit lake water quality and its post-flooding discharges to the downstream receiving waters. Please describe potential options and considerations to shorten the flooding time frame and maximize the filling rates (for example, additional water supplied from Tatelkuz Lake).	The water management strategy already includes directing surplus water from the ECD, TSF, and Upper Waste Stockpile to the Open Pit from the end of open pit mining in Year 18 through Closure to assist with pit filling. Directing additional sources of water to the Open Pit could be considered an option if downstream IFN flows can be maintained. Additional sources of water at the Project that could be considered to assist with pit filling include runoff from the Lower Waste Stockpile, water directed to the WMP, and water diverted around the TSF via the North Diversion System.		BC ENV (R.Martinka, C. Donnelly)	KP		N/A	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
174	-	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Information Requirement	Yes	Existing and proposed monitoring wells near the LGO and two waste stockpiles appear to be clustered around the LGO Collection Pond. Based on the topography and particle tracking presented in the Numerical Groundwater Modelling Report, some groundwater monitoring should be considered along the topographic depression between the LGO and Lower Waste Stockpile. Please address this comment and provide the relevant rationale.	The location recommended by the reviewer is a good site for a monitoring well. The location of the proposed nearby monitoring well MW-R is downgradient of material initially placed in the LGO in Year 1, as shown on Figure 7.3 6 of Appendix 9-E and is intended to monitor for seepage from the LGO Stockpile and/or Collection Pond. Access to this area is difficult due to the wet conditions and limited work area and may not be possible until after construction of the Collection Pond. Ability to access the area downslope of the LGO Stockpile and Collection Pond to install monitoring sites will be assessed during the proposed site investigation in 2022. However, the area identified by the reviewer may be a better location than MW-R for a monitoring well. The valley immediately downslope of the LGO Stockpile is well-defined and contains a drainage, and as a result, if any potential seepage bypasses the LGO Stockpile liner and collection system it will discharge to the drainage that flows to the Water Management Pond. Surface water sampling at the Water Management Pond will be conducted monthly as described in the Mine Site Water and Discharge Monitoring Plan (Appendix 9-E) and may be a more effective method for identifying potential seepage bypass than monitoring wells located downgradient of the stockpile footprint that are restricted to monitoring groundwater along isolated flow paths.		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing

175	-	Hydrogeology	BC ENV (R.Martinka, C. Donnelly)		Jun 01, 2022	1	New	Information Requirement	No	The Mine Site Water and Discharge Monitoring and Management Plan describes installations of several new monitoring wells during the construction phase of the mine to facilitate tracking of groundwater evolution between future mine water sources and downstream receiving waters. In support of advancing hydrogeological conceptualization and modelling at the mine, new monitoring wells should be tested for hydraulic conductivity. Please clarify if hydraulic testing will be completed for new installations.	Yes, hydraulic conductivity testing (response testing) is planned at monitoring wells installed during construction of the project.		BC ENV (R.Martinka, C. Donnelly)	KP		Jordan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
176	Section 4.1.2.2 Post-mine Land Capability	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Section 4.1.2.2 Post-mine Land Capability states that the ecohydrological model updates will be submitted with the Five Year Mine Plan and Reclamation Program update. EMLI supports updates informed by reclamation trails.	BW Gold acknowledges this comment and confirms that its intention is to submit updates to the ecohydrological model, where applicable, to Five Year Mine Plan and Reclamation Program updates. Updates to the Five Year Plan will be informed by ongoing research and updates to management practices and standards.		EMLI (Liz Murphy)	IEG		Justin Straker (IEG)	TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
177	Table 4.1-5 RCP Ecosystem Summary for Vegetation and Wildlife –Comparing Pre-disturbance Ecosystems with Projected Post-closure Ecosystems	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Table 4.1-5 RCP Ecosystem Summary for Vegetation and Wildlife –Comparing Pre- disturbance Ecosystems with Projected Post-closure Ecosystems predicts the changes likely to occur from of the project. Please clarify if the changes in ecosystems predicted by the model are expected to support focal species life requisites post closure.	The Post-Closure Ecosystems are expected to support focal species life requisites. While it is not possible to entirely replicate the pre-development landscape and its ecosystems as a result of the substantive landscape-level changes involved in the mining process, substantial effort has gone into iterative attempts to reduce differences between pre-development and post-mining conditions. BW Gold will actively look for opportunities to continue this reduction throughout LoM through reclamation research trials and other initiatives, addressing the challenges outlined in section 4.1.4. Despite differences between pre-development and post-closure conditions, the established ecosystems on the post-mining landscape will provide substantial value for intended land uses and focal species.		EMLI (Liz Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 22	Ready for Publishing
178	Section 4.2.1.4 Reclamation-materials Balance	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Section 4.2.1.4 Reclamation-materials Balance explains a slight deficit in glaciofluvial soil with adequate mixed-parent-material surface soil and OVB to address the deficit on sites targeted for glaciofluvial coverage. It is understood that the estimate is conservative and therefore adequate glaciofluvial may be available at closure. However, if the mixed- parent-material soil is used where glaciofluvial is optimal, please comment on how this change may impact target ecosystems.	The mixed-parent-material mineral soil has a greater AWSC (approximately 120 mm/m versus 75 mm/m), which translates to an increase in soil moisture regime. Depending on the topography and underlying waste material, this can shift the site series to a wetter site series (e.g., ESSFmv1-02 to ESSFmv1-03). This would result in minor shifts in the overall post-closure ecosystem distribution. For example, a deficit of 0.02 Mm^3 corresponds to an area of 4 ha assuming a cover depth of 50 cm, so 4 ha of the 2,100 ha of disturbed area (0.2% of the area) may have a wetter soil moisture regime. Note that the ecosystems projected for both glaciofluvial and mixed-parent-material mineral soil are present in the pre-mine landscape and provide valuable habitats.		EMLI (Liz Murphy)	IEG		Justin Straker (IEG)	TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
179	Section 4.2.1.6	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Section 4.2.1.6 states “Road construction during the Early Works disturbance resulted in the creation of windrows along road edges. These windrows will be transferred to soil stockpiles for use in reclamation. Any new roads that are created during the life of the Project will be salvaged and stockpiled (i.e.., not stored in windrows) to ensure that this material is not degraded or lost.” This may form a permit condition	Noted.		EMLI (Liz Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 22	Ready for Publishing
180	Section 4.2.2.4	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Section 4.2.2.4 indicates that the Pit Lake is likely to require treatment; stratification of pit water is later discussed with a goal to improve surface quality. Section 4.7.7.2 Post- closure Ecosystems and Habitats indicates that riparian and aquatic vegetation is planned for the pit area. Please clarify if the goal of reclamation for the areas influenced by the pit water is to create habitat or deter wildlife and specify how the goal of reclamation in the areas adjacent to the pit links to the mitigations mentioned in the Appendix 9-H Wildlife (and Caribou) Mitigation and Monitoring Plans at closure. (Specifically, deterrence.)	The pit lake surface water quality model projections are not a guarantee of the eventual water quality, and recognizing this, BW Gold (see section 4.7.7.1) plans to conduct research trials on amendments that could improve surface water quality and thereby reduce WTP requirements of water pumped from the pit to maintain prescribed surface water levels. The final prescribed pit lake water level will determine the configuration of the littoral zone. As surface water quality improves, the potential for natural re-establishment of vegetation in some areas of the littoral zone may occur, and reduced use of wildlife deterrence mechanisms could result. Monitoring of		EMLI (Liz Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 21	Ready for Publishing
181	Section 4.2.3.2	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification and Potential Permit Condition	Yes	EMLI understands a reclamation trial is planned to begin in year 1 of mine operations. Section 4.2.3.2 states “Seed collection programs in areas adjacent to the mine site, with LDN and UFN involvement, should be initiated to improve availability of target species, and seedlings from this stock will have the added benefit of being adapted to local climate conditions. Small-scale nursery and/or field trials as part of the reclamation research program are recommended to test germination rates and vigor of seedlings grown from collected seeds well before the date at which seedlings are required for large-scale reclamation planting (Section 4.2.5.1, Vegetation and Cover Trials).” Please provide a schedule for when these activities, including a course nursery or construction plans, will commence and a rationale	BW Gold plans to construct the mine site nursery in Y-1 / Y+1, and to establish initial field trial sites at the same time (Section 4.2.5 and 4.2.5.1). Seed collection programs and propagation programs will be initiated at this time to ensure that early reclamation trial knowledge is available for progressive reclamation opportunities, or in the unlikely event of site care and maintenance early in mine life. (Note this would be required to support the Y+3 reclamation scenario).		EMLI (Liz Murphy)	ERM	IEG	Rolf	RT	Ready for Submission	AT, June 21	Ready for Publishing
182	Section 4.3 Trace Element Uptake in Soils and Vegetation	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Section 4.3 Trace Element Uptake in Soils and Vegetation states “Results of the updated baseline sampling are not yet available, but a cumulative baseline report that includes data from all soil, plant, and berry samples from 2011, 2012, and 2021 will be prepared, including statistical summaries, early in 2022, subject to data availability.” EMLI assumes the updated information will be submitted with the Annual Reclamation Report, please clarify if this is correct	Sampling completed in 2021 was completed outside of the Certified Project Description boundaries. The last paragraph in Section 4.3 indicates that the results of this monitoring will be reported in CFMP (Country Foods Monitoring Plan) reports. A cumulative soil and vegetation baseline report that includes 2011, 2012, and 2021 data is in final preparation and is planned to be available during application review. This report will also be submitted with the Annual Reclamation Report.		EMLI (Liz Murphy)	Entia	ERM	Lesley	RT	Ready for Submission	RT; June 19	Ready for Publishing

183	Section 4.2.6 Reclamation Monitoring	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Potential Permit Condition and Clarification	Yes	Section 4.2.6 Reclamation Monitoring states that "Details of the monitoring plan, including criteria and indicators of reclamation success and associated measures and thresholds will be developed as more detailed reclamation planning and implementation is conducted, and based on ongoing collaboration with Aboriginal Groups. The reclamation research and monitoring programs will be integrated into the overall design." Please provide a date for when these details will be provided	Appendix 4-G "Possible Reclamation Success Criteria" provides a table listing "Potential ecosystem characteristics that could be included during or after initial placement, or to evaluate reclamation success". The proposed table has been shared with Indigenous groups and agencies in the joint MA-EMA Application for review and BW Gold welcomes comments and suggestions to continue to refine the proposed table and criteria.		EMLI (Liz Murphy)	ERM		Rolf	RT	Ready for Submission	RT; June 22	Ready for Publishing
184	Section 4.7.3	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Section 4.7.3 states "The profile of the waste stockpiles has been engineered to minimize planar surfaces and create sigmoidal slopes with 20% gradient toe slopes, 30 to 40%-gradient short main slopes, and rounded crests similar to natural landforms." Although this information provides landform design objectives, please clarify site preparation activities planned for the waste stockpile slope faces.	Planned site preparation methods are described in Section 4.2.1.7 (Reclamation-materials Replacement) as copied below. "Placement of reclamation materials will be accomplished using large equipment, primarily bulldozers and loaders with shovels, in a manner that generates microtopography to improve microsites for plants and reduces erosion. Equipment operators should not seek to create planar surfaces with exact material depths, rather it is preferable to have surface roughness and undulations. The 'rough and loose' technique (Polster 2009), ripping, surface loosening with an excavator bucket, or other means of site preparation may be applied if additional decompaction is necessary or further creation of microtopography is desired. The following considerations will inform selection of appropriate decompaction and/or site preparation techniques:		EMLI (Liz Murphy)	IEG		Justin Straker (IEG)	TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
185	Section 5.3 of the End Land Use Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Section 5.3 of the End Land Use Plan indicates that community engagement will commence in year 3 to inform updates to the plan required in year 5. This may form a permit condition	BW Gold acknowledges the comment, and wishes to clarify that year 5 means the end of the first 5 year detailed mine plan, otherwise referred to as Y+3. Hence, the commitment to community engagement is intended to commence in Y+1, the first year of mine operations (Y-2 and Y-1 are construction years).		EMLI (Liz Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
186	Appendix 4-H: Trace Element Uptake in Soils and Vegetation	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Appendix 4-H: Trace Element Uptake in Soils and Vegetation indicates that one sedge species was sampled. Please clarify if additional aquatic or wetland vegetation will be included in future samples and provide a rationale with the response (why or why not).	Sampling outside of the Mine Site is proposed under the Country Foods Monitoring Plan (CFMP; EAC condition 41). Under the CFMP, monitoring of three vegetation and three berry species is proposed, including sedge (Carex spp.) and willow (Salix spp.) species. Willow species are also typically associated with wet soils or wetlands. In addition, under the Aquatic Effects Monitoring Plan (AEMP), periphyton (aquatic plant) sampling is proposed in Davidson Creek and Creek 661 (and other waterways). Both the CFMP and AEMP include adaptive management plans that allow for additional sampling to be implemented (both in terms of locations and types of media sampled) if unexpected changes due to the Project are identified. For reclamation monitoring, while a majority of the reclaimed Mine Site area will be upland terrestrial areas, wetland vegetation will be sampled where such ecosystems exist. As indicated in Section 4.3, "Target vegetation species will be synchronized between reclaimed areas and outside the CPD boundary where possible", thus sedge and willow species will similarly be targeted.		EMLI (Liz Murphy)	Entia	IEG	Lesley, ??	RT	Ready for Submission	RT; June 19	Ready for Publishing
187	Appendix 4-E Detailed Post-Closure Mapping Methodology	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Please clarify how site preparation is considered in the model summarized in Appendix 4-E Detailed Post-Closure Mapping Methodology.	Site preparation is not included as a component of the ecohydrological model, but is considered as an additional or post-modelling factor. While site preparation can certainly influence reclamation success by, for example, creating protective microsites and reducing erosion, there are limited mechanisms that would contribute to altering soil moisture regime (SMR). It is possible that capturing additional snow may retain sufficient additional moisture to shift SMR, but this is likely only in scenarios with large-scale site preparation--to the extent that the site preparation is forming meso-topography.		EMLI (Liz Murphy)	IEG		Justin Straker (IEG)	TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
188	-	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Please clarify which inputs to the ecohydrological model are considered ground truthed from baseline data and which inputs will be verified in the field to refine and confirm model outputs.	Waste rock: not ground-truthed--a hypothetical particle-size distribution and organic-matter/nutrient content were used and model inputs will need to be refined through sampling. Overburden: samples from two geotechnical drill holes were available; however, further sampling during operations will collect organic-matter and nutrient data, as well as verify if these samples represent the variability of overburden across the full site. Surface soil: model inputs representing surface soil were based on field measures (texture and coarse-fragment content) and lab data (organic-matter and nitrogen content). While these samples encompass the spatial extent of the site, further sampling that includes laboratory analysis of soil particle-size distribution will inform model refinements. Additional detail on data assumptions that require validation and further refinement through sampling are		EMLI (Liz Murphy)	IEG		Justin Straker (IEG)	TD	Ready for Submission	TD, 14-Jun	Ready for Publishing

189	Appendix 4-J Temporary Shutdown Section 2.1	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Comment	No	Appendix 4-J Temporary Shutdown Section 2.1 entitled Legislation, lists 10.6.1 and 10.6.2 as relevant sections of the Health, Safety and Reclamation Code for Mines in BC. EMLI notes that 10.6.9 will also apply to any specific closure scenario.	BW Gold acknowledges the comment, and the section of the code (10.6.9, On-going Management Requirements) will be added to the Care and Maintenance Plan (EAC Condition 11).		EMLI (Liz Murphy)	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
190	Section 6 of the Surface Erosion and Sediment Control Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Section 6 of the Surface Erosion and Sediment Control Plan includes a list of generic construction activities and potential effects. Please comment on any site-specific higher risk areas known at this time.	Baseline terrain stability ratings (completed in 2013; Appendix 2-D of the Application) indicate that the majority of the Project study areas are rated as stable (Class rating I, II, and III) in terms of slope stability and accelerated erosion, with unstable (Class rating V) or potentially unstable slopes (Class rating IV)occurring locally. Terrain stability classes (based on potential for surface erosion to occur following disturbance) are quantified within the RSA in Table 3.2-4 and illustrated in Annex 6 of Appendix 2-D. The majority of the RSA and mine site area have been assigned Terrain Stability Class II (stable). Unstable terrain (Class V) occupies less than 1% of the mine site study area, and is generally located along over-steepened river banks where the slope is actively being undercut by fluvial action, or very steep slopes where previous stability issues were identified (see Section 3.3.6 and Annex 6 of Appendix 2-D).		EMLI (Liz Murphy)	ERM	KP	Stephanie	RT	Ready for Submission	rt; June 20	Ready for Publishing
191	Section 6.2 of the Surface Erosion and Sediment Control Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Section 6.2 of the Surface Erosion and Sediment Control Plan indicates the Revised Universal Soil Loss Equation will be used to guide controls implemented and that “erosion potential will be established for disturbance areas and included in the design criteria of Issued for Construction (IFC) Drawings.” Please clarify when this information will be available for the disturbance areas within this Application area.	The soil erosion potential is an estimate of the quantity of soil that could be removed from a construction area due to erosion and transportation by unconcentrated surface water flow. The soil erosion potential is not calculated for the entire mine site - it is calculated for individual work areas, since the factors that are used to calculate the erosion potential (type and depth of soil, slope length, slope steepness, vegetation, and "support practice factor"), as well as construction activities, are highly variable. The "support practice factor" refers to measures that will be implemented to reduce the amount and rate of the runoff water by modifying the flow pattern, grade, or direction of surface runoff, thereby reducing the amount of erosion (i.e.., those outlined in Section 7 of the SECPCP (Appendix 9-A of the Application)). The soil loss estimates will be supplemented with judgement and experience of the QP (i.e.., the Environmental Manager or delegate), so that the erosion potential assessment is appropriate for each individual work area. The overall objective of the SEPSCP is to manage surface water flow within the project footprint so as to prevent sediment-laden runoff from potentially impacting adjacent watercourses. The plan outlines measures and procedures to be followed - it is not meant to be prescriptive, as erosion potential will vary by work area. A QP (i.e.., a Certified Professional in Erosion and Sediment Control (CPESC)) will direct selection and installation of BMPs, and monitoring will be conducted as outlined.		EMLI (Liz Murphy)	KP		Jim/Stephanie	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
192	Surface Erosion and Sediment Control Plan Figure 8-5	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Surface Erosion and Sediment Control Plan Figure 8-5: Tailings Storage Facility Mine Area Creek Diversion, illustrates a collection ditch and a diversion ditch. The collection ditch appears to discharge to a relatively level area above a silt fence upslope of riparian areas and the diversion ditch discharges below the silt fence. Please clarify controls to mitigate scour and erosion that are planned for discharge sites based on site specific conditions and expected flow volumes and velocities.	All diversion ditches will discharge through a stabilized outlet designed to handle the expected runoff velocities and volumes from the ditch without scouring (Section 7.3.3 of Appendix 9-A). A runoff collection ditch intercepts contact water runoff from disturbed areas and diverts it to a stabilized area where it can be effectively managed - collection ditches are used within construction areas to collect runoff and convey it to appropriate sediment control measures (Section 7.3.4 of Appendix 9-A). Energy dissipators are described in Section 7.3.7 of Appendix 9-A as pools used to dissipate the energy of fast flowing water and control erosion at the outlet of a ditch or a conduit passing water to minimize erosion of natural stream channels downstream. These measures will be field-fit and approved by the Environmental Manager (EM) or a delegate.		EMLI (Liz Murphy)	KP		Jim/Stephanie	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
193	Appendix 9-B Soil Management Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Appendix 9-B Soil Management Plan did not include a storage location for hydrocarbon contaminated soil. The Application indicates that contaminated soil will be removed for treatment at closure. Please confirm whether treatment of hydrocarbon contaminated soil during operations will be considered. If a landfarm is not planned, please clarify plans to store hydrocarbon contaminated soils on site during operations.	Appendix 9-B of the Soil Management Plan is correct in that there is presently no landfarm identified for the mine site. Hydrocarbon contaminated soil resulting from activities at the mine site will be excavated and stored in lined containment at the waste management facility and periodically trucked from the site when sufficient volumes warrant. BW Gold will continue to consider whether treatment of hydrocarbon contaminated soil during operations is		EMLI (Liz Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
194	Appendix 9-C Construction Environmental Management Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	Yes	Appendix 9-C Construction Environmental Management Plan (CEMP) indicates that the plan submitted can be “adapted to support” discrete construction but that “standalone construction environmental management plans will be developed for specific components in conjunction with Issued for Construction plans and the construction execution plan.” Based on the construction activities listed in Table 6-1 Preliminary Project Construction Schedule, please clarify which projects (or group of projects) will include submission of a standalone CEMP.	A standalone Construction Environmental Management Plan (CEMP) has been developed for the early works activities and for the transmission line. BW Gold does not anticipate submission of standalone CEMPs for any activities taking place within the Mine Site.		EMLI (Liz Murphy)	ERM		Jesse	RT	Ready for Submission	RT; June 14	Ready for Publishing

194	Appendix 9-C Construction Environmental Management Plan	Reclamation	EMLI (Liz Murphy)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	Based on the quote in EMLI's round 1 comment, site-specific plans will be prepared for "specific components" with IFCs. The June 30th response indicates additional site-specific CEMPs are not expected to be required. Please clarify if, when and for which components site-specific CEMPs are planned to be submitted with IFCs.	BWG contends that the current Appendix 9-C CEMP is sufficiently comprehensive and detailed to provide the necessary requirements for all construction sites. EPCM contractors, may, however provide their own environmental management plans based on the construction plan for specific components, and issues which are to be managed at individual sites, at which time BWG will review the contractors' plan for alignment with, at a minimum, the CEMP requirements including the 20 supporting management plans and 10 Standard Operating Procedures (Table 2-1). At this time, EPCM contractors are not engaged at the stage where BWG has received information on whether construction contractors will be submitting additional specific plans for individual construction sites listed in Table 6-1.		EMLI (Liz Murphy)	ERM		Tonia/Mark	RT	Ready for Submission	AT, Aug 09	Ready for Publishing
195	CEMP Section 7 Environmental Constraints Mapping	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	CEMP Section 7 Environmental Constraints Mapping indicates that mapping updates will be made to incorporate baseline information from 2021 and 2022. a.EMLI understands that the mapping updates will inform site-specific CEMPs. Please provide a date for when the updates will be submitted and clarify if the updated mapping is expected to be submitted with the site-specific CEMPs.	Mapping updates will be incorporated as required through the annual review process as described in Section 18 (Plan Revision) of the Construction Environmental Management Plan (CEMP). Where updated mapping is relevant to site-specific CEMPs (e.g., Transmission Line) or discipline-specific management plans (e.g., Wetland Management and Offsetting Plan), the mapping will be provided in those plans.		EMLI (Liz Murphy)	ERM		Jesse	RT	Ready for Submission	RT; June 14	Ready for Publishing
196	CEMP Table 8	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	CEMP Table 8-1 entitled Risk Management Ratings includes a decision hierarchy and general information on mitigations proposed for sensitive areas and species. The actual decisions, timing and mitigations based on this process will be required for site-specific CEMPs.	All Construction Environmental Management Plans (CEMPs) prepared for the Project will include the specific timing and mitigations that adhere to the Risk Management Ratings indicated in Table 8-1 of the CEMP.		EMLI (Liz Murphy)	ERM		Jesse	RT	Ready for Submission	RT; June 14	Ready for Publishing
197	Appendix 9-F Vegetation Management Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Appendix 9-F Vegetation Management Plan indicates that the federal Decision Statement requires a white bark pine management plan. Please provide the standalone white bark pine management plan.	The Whitebark Pine Management Plan is not required as part of the BC permitting process. It is required by the federal Decision Statement Condition 8.20. The draft plan was submitted to ECCC, Indigenous groups and BC FLNRORD for review on February 23, 2022 as required by the Decision Statement. Comments were received from FLNRORD on March 29, 2022. While the Plan does not form part of the application and BW Gold is still finalizing the plan based on feedback received, BW Gold will provide the final plan directly to the reviewer for information and to support future engagement on reclamation.		EMLI (Liz Murphy)	ERM		Jesse	RT	Ready for Submission	RT; June 14	Ready for Publishing
197	Appendix 9-F Vegetation Management Plan	Reclamation	EMLI (Liz Murphy)		Jul 14, 2022	2	Follow Up		No	It is EMLI's understanding that proposed research trials in the "SBSmc3 will incorporate whitebark pine to assess viability for planting on xeric and subxeric sites." As whitebark pine is a component of reclamation, the management plan should be included with other management plans for the project. Please provide the plan for future reference and understanding.	BW Gold acknowledges the comment. The Whitebark Pine Management Plan was completed and approved in accordance with the federal Decision Statement Condition 8.20 will be an integral part of the mine site reclamation plan (see Section 4.2.3.2 and Section 4.2.5.2 of Chapter 4). The details of the whitebark pine management measures supporting reclamation research and progress on its implementation will be recorded in the Annual Reclamation Report. The mine site will have all management plans on file as part of the EMS, regardless provincial or federal requirements. While the Plan does not form part of the application and BW Gold is still finalizing the plan based on feedback received, BW Gold will provide the final plan directly to the reviewer for information and to support future engagement on reclamation.		EMLI (Liz Murphy)	ERM		Tonia	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
198	Table 8.2-1 of Appendix 9-O Air Quality and Fugitive Dust Management Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Table 8.2-1 of Appendix 9-O Air Quality and Fugitive Dust Management Plan indicates that planned best management practices for dust control at the Low Grade Ore stockpile will be forming low horizontal piles and spraying water on hot dry days. Given the timeframe the stockpile is expected to be in place, please clarify how consistent application of water will occur when required.	For daily management of the active tip head, water trucks will be used for dust suppression along the traffic areas and the dump face. For management of fugitive dust off the larger stockpile, a sprinkler system would be installed for problem areas. Water would be utilized from the collection pond and pumped to feed the system. For large flat areas exposed over the longer term, a chemical treatment (calcium or magnesium chloride) would be utilized.		EMLI (Liz Murphy)	ERM		Andres	RT	Ready for Submission	AT, June 18	Ready for Publishing

199	Table 8.2-1 of Appendix 9-O Air Quality and Fugitive Dust Management Plan	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Table 8.2-1 of Appendix 9-O Air Quality and Fugitive Dust Management Plan indicates that planned best management practices for dust control on upper and lower waste rock piles include watering stockpiles on dry windy days or applying calcium chloride or magnesium chloride in freezing conditions. Please clarify how spraying will occur on these sites.	For daily management of the active tip head, water trucks will be used for dust suppression along the traffic areas and the dump face. For management of fugitive dust off the larger stockpile, a sprinkler system would be installed for problem areas. Water would be utilized from the collection pond and pumped to feed the system. For large flat areas exposed over the longer term, a chemical treatment (calcium or magnesium chloride) would be utilized.		EMLI (Liz Murphy)	ERM		Andres	RT	Ready for Submission	AT, June 18	Ready for Publishing
200	Appendix 9-H Section 3.1 Deterrence of Wildlife	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Clarification	No	Appendix 9-H Section 3.1 Deterrence of Wildlife states that wildlife will be deterred from some areas such as the TSF, pit lake and control ponds. Please clarify how deterrence will occur and in what areas specifically this will be required post closure	Section 3.10 Deterrence of Wildlife includes subsection 3.10.3 with details on when and how deterrence will be necessary, based on an ecological risk assessment and water quality monitoring data. Deterrence requirements post-closure will also be based on these data and assessments, therefore it is not possible to currently say which areas will require deterrence in the future. If deterrence of any Project waterbodies is required post-closure, methods will be determined in the same manner as described in Section 3.10.3, with deterrents selected based on the types of species present, operations experience on site, and the success of the mitigation completed during operations.		EMLI (Liz Murphy)	ERM		Greg/Rolf	RT	Ready for Submission	RT; June 14	Ready for Publishing
200	Appendix 9-H Section 3.1 Deterrence of Wildlife	Reclamation	EMLI (Liz Murphy)		Jul 14, 2022	2	Follow Up	Potential Permit Condition	Yes	Thank you for clarifying. Please summarize how the potential for wildlife deterence in these areas post closure is captured in the bond.	The Reclamation Liability Cost Estimate spreadsheets Tab 4- Monitoring oultines the categories and level of effort for environmental monitors (technical, independent 3rd party, and First Nations) to fulfill environmental monitoring activities, including wildlife monitoring, during post-closure. All staff on site during post-closure will be trained on wildlife observations and records maintenance. The Reclamation Liability Cost Estimate "Summary" sheet includes an amount of 15% of post-closure costs for Contingency as required by EMLI which can be applied to physical works/actions required to be undertaken should wildlife monitoring results post-closure indicate that wildlife deterrence measures become necessary.		EMLI (Liz Murphy)	ERM		Greg/Rolf	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
201	Joint MA/EMA Permits Application Chapter 4	Reclamation	EMLI (Liz Murphy)		Jun 01, 2022	1	New	Information Requirement	No	The shapefiles provided with the Application were used to draft a Permitted Mine Area and EMLI notes that linear features (pipeline, access road and airstrip) and the mine disturbance area were included for a total of 3321.9 ha. Updated shapefiles for the area proposed to be considered under the Mines Act Application specifically are required. That is, shapefiles including only the areas for which this Application is seeking approval under the Mines Act.	A total of 4286.1 ha is the proposed Permitted Mine Area to be considered for approval under the Mines Act Application. BW Gold will provide the EMLI reviewers and other reviewers the following shapefile attachment: "R1_EMLI_Reclamation_PMA Shapefiles_Comment ID 201" which proposed Permitted Mine Area for which this Application is seeking approval. As noted by the reviewer, the previous mine disturbance area provided to EMLI (3321.9 ha) considered only		EMLI (Liz Murphy)	ERM		Jesse/Tonia	RT	Ready for Submission	RT; June 22	Ready for Publishing
202	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Comment/ Information Requirement	No	EMLI released the Interim Major Mines Reclamation Security Policy on April 5, 2022. EMLI acknowledges that Artemis developed the RLCE for the Application before the policy was released, but may choose to consider the policy at this time. If Artemis chooses to apply the policy guidance, an updated reclamation liability cost estimate and supporting documentation must be submitted for review. Artemis should clearly document the updates as a result of implementation of the policy guidance in the response.	BW Gold acknowledges that the Blackwater Reclamation and Closure Liability Cost Estimate was prepared and submitted prior to EMLI releasing the Interim Major Mines Reclamation Security Policy on April 5, 2022. BW Gold is reviewing the interim policy and will determine how the company proposes to incorporate elements of the policy, and if so, reflect these changes in the updated Reclamation and Closure Liability Cost Estimate.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	At, June 19	Ready for Publishing
203	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Comment	No	The review comments below generally apply to both the Year +3 and the LoM cost estimates. Please consider each review comment and provide a response for, and update, each cost estimate, as required. If the review comment only applies to one of the cost estimates, and this is not specified in the review comment, please include that information in the response	BW Gold acknowledges the comment and each response specifies whether the response pertains to the Y+3 or LoM cost estimates.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
204	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	EMLI's review of reclamation liability cost estimates is over a 100-year time period, not a 100-year post closure time period. For example, for the Year +3 scenario, costs for post closure monitoring and maintenance requirements are only required for 95 years, while for the LoM scenario costs for post closure monitoring and maintenance requirements are required for a subsequent 75 years. Please update the cost estimate for the 100-year period (Year +98).	This response pertains to the Y+3 and LoM cost estimates. The Y+3 and LoM cost estimates have been updated in conformance with the EMLI direction on time periods to incorporate for the cost estimates.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
205	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	EMLI understands that revegetation costs are currently based on 1500 stems/ha and future estimates will be based on results revegetation trails with native seed and plugs. Please include a summary and cost estimate breakdown for native seed collection, propagation, and nursery construction as outlined in Chapter 4 of the Application.	This response pertains to the Y+3 and LoM. The nursery construction capital cost will be realized by Y+2 and therefore does not need to be included in the cost estimate, in the same manner that other mine construction capital costs are not included in the RCLE. The cost estimate for native seed collection, propagation and nursery operation and maintenance costs will be included in the final updated RLCE.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
205	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	EMLI notes the nursery decommissioning costs have been added to Y+27 LoM. The costs applied for Y+3 are 0 and the memo states that "The nursery will be closed early in the Y+3 early closure scenario, timing depending in part, on success of early seed collection and propagation programs." EMLI believes the nursery woud be required, to support revegetation trials in C&M and/or if closure occurred following the C&M phase, to complete reclamation as per the current plan. Please include these costs or clarify where they are applied and/or the rationale for not including them. [Information Requirement]	BW Gold notes this discrepancy and has updated Section 5.2.2 of the RLCE Memo and notes it is the same cost as LoM: $100,000 which are now added to Y+3 T-2 Infrastructure for the cost of closing the nursery.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
206	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	Yes	EMLI understands that the project does not include onsite treatment of hydrocarbon contaminated soils. Off-site disposal costs of all contaminated soil is estimated to be 250 m3 in Year +3. Please provide a rationale for this estimate.	This response pertains to Y+3 and LoM. - The rationale for the estimate of 250 m3 of contaminated soil to be treated in Y+3 and LoM is based on the following assumptions. - The following locations are potentially the most likely locations where hydrocarbon contaminated soils may result from the activities typical for the site and may have residual contamination (contamination generated during construction and operations /closure is addressed at the time of contamination):		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
207	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	a. The rate for contaminated soil is based on the 2018 EMLI Regional Reclamation Bond Calculator soil remediation rate which was designed with smaller scale operations in mind. Please adjust the rate and provide a breakdown and rationale including location of soil treatment facility and current transportation costs.	This response pertains to Y+3 and LoM. - The BW mine site presently does not identify a soil treatment facility. A decision on whether to identify, permit and operate a future soil treatment facility has not been made. - If, or until, such time as an on-site soil treatment facility is established, BW Gold will collect and transport contaminated soil for offsite treatment. Detailed breakdown of costs are included in the RLCE update. See also the responses to ID#206 and ID#210.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing

207	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Clarification	No	EMLI notes the cost applied to off site treatment of contaminated soils for Y+ 3 is $423,279. Please clarify how this cost is applied to the period between Y+3 and closure (additional costs for this period do not appear to be included in the LoM spreadsheet). [Clarification]	The RLCE Memo has been updated in Section 6 to provide details for Y+3 and LoM Contaminated Soils management. The details for these costs have been included in App 12 for LoM. Costs for the assessment and handling of contaminated soils is based on a Phase 1 and Phase 2 assessments and soils rehandling.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
208	Appendix 5-B Unit Cost 2021	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Clarification	No	The tab App 5-B Unit Cost 2021 includes inflation calculations. EMLI notes that these rates may not have been used for all cost calculation (e.g., contaminated soil T-2 Infrastructure tab). Please clarify if inflation rates were applied to Y+3 costs.	This response pertains to Y+3 and LoM. BW Gold has reviewed rates and inflation calculations and applied inflation rates to cost inputs where applicable. Where the Blue Book 2022 input cost rates were used for equipment rates, no additional inflation rates were applied.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
209	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please update inflation calculations to current rates.	This response relates to Y+3 and LoM. - BW Gold has reviewed and updated inflation calculations to current rates, and noted the source and metric applied for the inflation adjustment(s).		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
210	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provided costs for a contaminated sites assessment.	This response relates to Y+3 and LoM. - A detailed cost breakdown and assumptions for undertaking Phase 1 and Phase 2 contaminated sites assessment is included in the updated RCLE, and additional overview discussion is provided in the updated accompanying submission Memo.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
210	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Clarification	No	Please indicate where specifically (tab, cell, section) the detailed breakdown is located. For example the memo mentions cost quotes for treatment off site. Please indicate where those are applied. Please also clarify how costs for operational contaminated soil off site treatment are seperate from treatment estimates as a result of Phase 1 and Phase 2 contaminated site assessments. [Clarification]	The RLCE Memo has been updated in Section 6 to provide details for Y+3 and LoM Contaminated Soils management. The details for these costs have been included in App 13 for Y+3 and App 10 for LoM. Costs for the assessment and handling of contaminated soils is based on a Phase 1 and Phase 2 assessments and soils		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
211	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a summary and estimated cost breakdown of the additional scientific and engineering work required to complete a site characterization assessment and development of a final closure plan for the existing open pit.	The response pertains to LoM. The scope, assumptions and cost breakdown of undertaking the work to develop the final closure plan for the open pit, consistent with the closure strategies described in Section 4.7.7 of the MA-EMA application, are included in the updated RLCE.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg	RT	Ready for Submission	AT, June 19	Ready for Publishing
211	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	This information could not be located. The section of the RLCE memo referenced in the table of concordance appended to the memo (4.2) does not exist. Please provide the requested costs or indicate specifically where they can be located in the updated submission. [Information Requirement]	The Open Pit closure plan will be an integral part of the following plans developed during the final 5 years of the LoM: Final 5 Year Detailed Mine Plan; Final End Land Use Plan; and Mine Closure and Reclamation Plan. Reference to End Land Use Plan requirement (with open pit closure as an example component) is referenced in Section 5.3, and the cost breakdown listed on Tab T-4 Monitoring		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
212	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please clarify where costs for monitoring and maintenance of erosion and sediment control infrastructure is applied.	The response pertains to both Y+3 and LoM. Site Maintenance and Equipment costs are listed in Tab T-5 "Maintenance and Security". Further description and rationale for the estimated costs will be provided in the updated RLCE.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
212	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	Appendix A of the memo indicates that Tab-5 includes costs for monitoring and maintenance of erosion and sediment control infrastructure. A line item for these costs was not found in the Y+3 or the LoM spreadsheets. Please provide the costs or indicate specifically where and how these costs are applied. [Information Requirement]	Maintenance staff and equipment on site, roads and ditches, control by design, maintenance schedule are noted in Section 8 and 9 of Memo. Indicated in Tab T-5; there are four full-time personnel on-site 5 days a week. There primary tasks include but are not limited to:, monitoring and maintenance of geotechnical instrumentation and reclamation, camp		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
213	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please include costs for dust control.	The response pertains to both Y+3 and LoM. The costs for dust control have been calculated and included in the updated cost spreadsheet and assumptions documented in the cover memo.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
213	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	Tab-5 includes costs for dust on roadways. Provisions for dust control on TSF beaches and the LGO stockpile were not found. Please provide costs for dust control on LGO and TSF beaches expected at Y+3 (Application review indicated a sprayer may be used on the LGO if required). [Information Requirement]	The LGO dust control costs are included in App 14A LGO Rehandle. Costs for dust control on the LGO stockpile are estimated to be $1M whilst the stockpile is rehandled. This figure is approximately 25% of the total cost presented for the rehandle of the stockpile in Yr16 The TSF beach dust control costs for RLCE Y+3 are included in App 11 TSF Dust Mgmt., and incorporated in T-2		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
214	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please clarify how potential costs for adaptive management activities which may result from monitoring are applied.	This response pertains to both Y+3 and LoM. The rationale for costs resulting from adaptive management activities are summarized in the RLCE submission memo, reflecting the Adaptive Management framework described in Section 4.10.10. The indicative costs are represented in Tab T-4 of the updated RLCE		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
215	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please include costs to complete the End Land Use Plan.	This response pertains to both Y+3 and LoM. Chapter 4 - Appendix 4-A presents a detailed End Land Use Plan. This End Land Use Plan will be revisited with each 5 Year Mine Plan and Reclamation Closure Plan update		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing

216	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Reclamation activities such as soil application will require on site QPs, please clarify where these costs are applied.	The response pertains to Y+3 and LoM. The Mine will employ onsite QPs with responsibility for placement of soil as per reclamation prescriptions. The QPs are company personnel and their cost is not identified, just as the cost of all other company employees are not reflected in the RLCE.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
216	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	The cost estimates provided are to be inclusive of all personnel required in the event of closure without the company's support. Please provide the costs for all QPs required to oversee the reclamation. EMLI notes some personnel are included in T-6 and some QPs included in T-4. [Information Requirement]	The cost of a QP has been added to the T-5 Mine Maintenance (note T-designation change). Depending on requirements there will be different QP's on site to support different activities.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
217	Document 3 Lump Sum Unit Rates	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a more detailed explanation and breakdown of how the removal costs were determined for the various buildings and infrastructure that have been calculated 'based on mine sites with similar cost estimates', as listed in the 'Lump Sum Unit Rates' in Document 3.	The response pertains to Y+3 and LoM. BW Gold re-examined Tab T-2 "Infrastructure"and has recalculated cost breakdown of the primary mine infrastructure components. A total of 13 large items, are related to WTP will have cost breakdowns presented. The remaining 25 of 38 components listed (65% of total) represent a total lump sum liability estimated to be $1,319 (7.5% of the current total infrastructure liability estimate of $17.44M) and individual cost breakdowns of these items (20 below $50K, and 5 ranging from 60K to $250K) will remain as lump sum estimates with some exceptions; for example: substantion removal, groundwater wells, and pipelines. BW Gold intends to provide as many of the large infrastructure cost breakdowns as possible during R1 with a focus on those large cost items that would be incurred early in the closure phase . Updated WTP Capital and		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	BWG	Rolf/Alastair	RT	Ready for Submission	AT, June 22	Ready for Publishing
217	Document 3 Lump Sum Unit Rates	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	Lump sums are problematic as they can not be assessed. Cost breakdowns (such as those provided for the Plant site) are required. Please provide a rationale for not providing the breakdown or provide the cost breakdowns used to derive the costs. For example sums in T-2 column I. [Information Requirement]	BWG has revisited the LS items and included additional new estimates, and in some instances inflation adjusted estimates derived from past Feasibility Study documentation as noted. Excluding KP's LS estimate for TSF spillway ($3.5M), LS items based on professional judgement account for 0.60% for Y+3 and 0.017% for LoM ($93,731) and will not be further estimated at this time to inform Y+3 and LoM totals.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
218	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Mobilization and demobilization costs (may be estimated at 5% of the value of the physical work) must be included for all reclamation and monitoring activities. Please revise the cost estimate accordingly.	The response pertains to Y+3 and LoM. Mobilization and demobilization costs, estimated at 5% of physical work, have been assigned to all reclamation activities in the updated cost estimate. (Reference cost spreadsheet tab if appropriate).		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
219	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Do the lump sum values, outlined in Comment #3, include personnel, equipment, fuel, and transportation costs associated with the removal activities? If not, please adjust the cost estimate accordingly.	The response pertains to Y+3 and LoM. The Lump Sum values outlined in Comment #3 are all-in costs and include personnel, all-in equipment rates, fuel, transportation, administration and other affiliated costs.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	At, June 22	Ready for Publishing
220	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please update the Year +3 and Year +15 cost estimate to include implementation of the LGO Stockpile contingency plan with the following information: a. Reduction in post-closure water treatment costs, if any (Year +3 cost estimate only); b. Third-party contractor rates for equipment and operators; c. Mobilization and demobilization costs (may be estimated at 5% of the value of the physical work); d. Further information on the assumptions included in the general and administrative costs; e. Engineering costs;	This response pertains to the Y+3 LGO stockpile contingency plan. The information requested is provided in the Y+3 LGO stockpile contingency plan cost estimate and now represented separately in the RLCE submission memo and the cost spreadsheets. The Y+15 LGO stockpile contingency plan cost estimate is not included in the RLCE, as it is a separate cost scenario from the Y+3 (1st 5 year Detailed Mine Plan), and LoM (end of mine life) requirement for the Cost		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	BWG	Rolf/Mateus /Alastair	RT	Ready for Submission	AT, June 19	Ready for Publishing
220	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement & Clarification	No	a) The LGO rehandle costs include an assumed $400k per year for water treatment (lime dosing). Please provide a breakdown of the costs included in this estimate and indicate how this annual cost would be impacted by the size of the LGO stockpile, if at all. [Information Requirement] b) The memo states that the estimated cost to rehandle 10Mt of LGO would be $22.1 million. This	The RLCE Memo Section 6.3 Low Grade Ore Stockpile Rehandle includes discussion of the response. a) Spreadsheet will be adjusted to reflect this b) $2.21 was the average cost to rehandle the LGO back to the open pit based on a total volume of 116 Mt. The spreadsheet will be adjusted to reflect this. c) The cost estimate for rehandle of the LGO material to the TSF is now not considered as an option and		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
221	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide additional rationale for the assumptions in the surface water and groundwater quantity and quality monitoring costs related to the number of sample locations and the frequency of sample collection. The cost estimate for surface water and groundwater quantity and quality monitoring costs must be reflective of the Blackwater Mine Environmental Management Act (EMA) permit and Metal and Diamond Mine Effluent Regulation sampling requirements.	This response pertains to Y+3 and LoM The RLCE reflects the current surface water and groundwater quantity and quality monitoring costs as described in the MA-EMA application and includes the proposed EMA and MDMER requirements. T-4 "Monitoring" A more detailed linkage and referencing of the RLCE content and MA-EMA application content will be		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
221	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	Please break down the activities represented by the MSDP and ML/ARD monitoring activities in the App 8 tab. Please provide the detailed rationale for the $3,112 assigned to labour for the AEMP, MSDP/ML/ARD, and Groundwater monitoring programs. [Information Requirement]	Y+3 and LoM App 7 AEMP , GW, MSDP , provides the activity and cost breakdown including labour based on the following assumption: The closed mine site will maintain IEM staff on-site for monitoring (1.5 FTE) plus equipment to support monitoring staff. This will reduce the costs associated with using contractors to do the monitoring.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
222	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a breakdown of the assumed costs associated with any other monitoring requirements associated with the EMA permit and the MDMER. This could include but is not limited to meteorology, air quality, aquatic biology, and/or receiving water toxicology or effects assessments. At a minimum, the number of sample locations and frequency of sample collection or study implementation must be reflective of the activities required to maintain compliance with the Blackwater Mine EMA permit	This response pertains to Y+3 and LoM. The RLCE reflects a range of monitoring requirement costs. Acknowledging that the EMA permits are not yet issued for the Project, and the MDMER monitoring plan is likewise yet to be approved, BW Gold will revisit the RLCE to ensure its completeness and link to proposed monitoring programs in the MA-EMA application		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
223	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a breakdown of the post closure costs over the 100-year period associated with the monitoring and maintenance of the till/overburden layer on the tailings beaches in order to maintain the function of shedding meteoric water and limiting oxygen ingress.	This response pertains to Y+3 and LoM The post-closure costs to monitor and maintain the till/overburden layer on the tailings beaches will be identified in the RLCE in T-4 Monitoring, and T - 5 Maintenance and Security. Please see attachment "R1_EMLI_Reclamation Comment ID 220, 221, 223, 225, 226.pdf" for supporting		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg	RT	Ready for Submission		Ready for Publishing
223	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Clarification	No	A line item for post closure monitoring and maintainance of the till/overburden tailings beaches was not found in the Y+3 workbook or the LoM workbook. Please clarify where the costs are applied. [Clarification]	Once it is covered and vegetated no maintenance is anticipated. RLCE Memo Sections 6.5 and 6.6 discuss post-closure monitoring and maintenance, including reference to TSF beaches. Formal monitoring and reporting of revegetation is costed for the first 20 years in T-4 Monitoring in 5 year		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg				

224	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a breakdown of the post closure costs over the 100-year period associated with monitoring and maintenance of the geosynthetic and HDPE liners in the TSF(s) and the WMP that are relied upon for seepage mitigation.	This response pertains to Y+3 and LoM Costs associated with monitoring geosynthetic and HDPE liners in the TSF(s) and the WMP are incorporated into the annual Geotechnical inspections for the mine site. Properly installed, maintenance of geosynthetic liners and HDPE is expected to be very minimal. HDPE is considered the longest life span of all synthetic liners. Predictions for the life span (half-life predictions) of HDPE liners have been estimated to be over 400 years in covered applications, based on operating temperatures. The primary cause of degradation of lining systems is oxidation of the geomembrane, which eventually weakens the membrane and allow stress cracks to form. Oxidation is inhibited by limiting exposure to UV radiation and open air environments, and maintaining lower ambient temperatures around the lining system. HDPE is chemically resistant to most substances, especially at lower temperatures (20C or less as typical for		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg	AT	Ready for Submission	AT, June 25	Ready for Publishing
225	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a breakdown of the post closure costs over the 100-year period associated with pumping of water for the purposes of seepage collection and freshwater supply. Please itemize each source of pumped water and include details on the assumptions associated with the cost estimate, including pumping duration, frequency, and rate.	This response pertains to Y+3 and LoM The information on pumping background will be presented in the updated RLCE Submittal Letter, and the costs included in the RLCE costing spreadsheets.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg	RT	Ready for Submission		Ready for Publishing
226	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide a breakdown of the assumed geotechnical and hydrotechnical monitoring and reporting costs, including labour and transportation (if not already included in site maintenance costs) and reporting costs of water management structures over the 100-year period.	This response pertains to Y+3 and LoM The RLCE Submittal Letter will present the scope of geotechnical and hydrotechnical monitoring and reporting which is collected in the RLCE cost spreadsheet Tab T- 4		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg	RT	Ready for Submission		Ready for Publishing
226	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	2	Follow Up		No	See memo titled "M-246 Blackwater Major Works Application - Reclamation Security Cost Estimate - EMLI Geotechnical Review of Response to ITT ID #226".	Due to the length of the memo provided, the comments have been added to this ITT as Comment ID 2300-2308. Please see responses to Comment IDs 2300-2308. Complete. BW Gold acknowledges the comment and no further response is required.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf, Greg				
227	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	How was the value of $93/day for indirect costs estimated? Please include supporting information and a breakdown of included costs.	This response pertains to Y+3 and LoM. The $93/day value of indirect costs includes: accommodations, food, and facilities support costs, as described in Section 9 of the RLCE submission memo, and were provided by Artemis Gold. The value of the indirect cost will be revisited for the RLCE update		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
227	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Clarification	No	The day rate in Tab 6 is now $82.50 for all personnel listed. Please clarify why the rate was reduced and provide a breakdown of how it was derived. [Clarification]	BW Gold re-evaluated the rate and the current is considered to be more accurate. Where 3rd party estimates may have varied, and the cost seems reasonable, this has been incorporated.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
228	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	How was the hourly utilization of site maintenance equipment and operators, site labour, and site security determined? Please provide additional rationale supporting the assumptions.	This response pertains to Y+3 and LoM Section 8 of the RLCE submission **memo** provides a basic description of the assumptions for requested information accounted for in Tab - 5 "Maintenance and Security and will be reviewed to provide additional detail as applicable in the update for the reviewers		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
229	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Does the hourly utilization include time for maintenance of water management (contact and non-contact water) and erosion and sedimentation control infrastructure? Please provide additional detail on the assumptions used to estimate these costs. Please provide these costs if not already included.	This response pertains to Y+3 and LoM The hourly utilization includes time for the reviewer's list of activities. A more detailed description and assumptions used to develop these costs listed in Tab T-5 "Maintenance and Security" is provided in the RLCE update		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
230	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please demonstrate how costs for monitoring and maintenance of pit lake levels are included in the cost estimate. Please provide additional detail on the assumptions used to estimate these costs. Please provide these costs if not already included.	This response pertains to Y+3 and LoM. The projected cost for monitoring and maintenance of flooded pit lake levels have now been presented as separate line entries in the Tab "Annual Liability" and T-4 "Monitoring".		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
230	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	These costs were not located in the tabs referenced in the response. Please clarify if the "Water level" line item in the App 8 tab corresponds to the monitoring of pit lake levels. If so, please provide a breakdown of the assumptions included in this line item and how it has been incorporated into the costing, as there do not appear to be any costs associated with this item. If this cost does not refer to pit lake levels, please provide the requested costs or indicate specifically where they may be located in the updated submission. [Information Requirement]	RLCE Memo Section 6.5 references the requirement to maintain and monitor Pit Lake water levels. Monitoring of the flooded Pit Lake is done by the on-site personnel T-5 Mine Maintenance. Levels are reported in the Annual Geotechnical reporting T-4.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
231	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide additional detail on post-closure site maintenance costs including power requirements, permit fees, and insurance.	This response pertains to Y+3 and LoM. Post-closure power costs for pumping and WTP operations are included in Tab 3. WTP costs as presented in the referenced input technical documents. Any additional power uses are now more clearly identified, and costs are included in the updated RLCE. Permit fees and Insurance costs are now included in the updated RLCE.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing

231	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	Neither permit fees nor insurance costs were located in the updated cost estimate. Please provide these costs or indicate where they can be located. [Information Requirement]	The updated cost estimate incorporates insurance fees in Tab T-6 Indirect Costs.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
232	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Clarification	No	Please clarify if post closure site management costs include retaining a Mine Manager.	BW Gold will retain a Mine Manager until such time as a Mines Act Permit is no longer in effect for the site. The cost of retaining a Mine Manager during the Post-closure site management, including supporting costs, are reflected in the updated cost estimate.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
232	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Clarification	No	Please clarify where the cost of retaining a Mine Manager has been considered in the updated cost estimate, other than the allowance for accommodation in App T-6. [Clarification]	The costs for the Mine Manager is included T-5 Mine Maintenance. The manager is included as one of the full-time personnel on the site. Also referenced in Section 6.7 of the Memo.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
233	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please indicate where redundancies for pump systems (back up) are included in the cost estimate.	Response pertains to Y+3 and LoM. The detailed cost estimate will document assumptions related to pump system redundancies as notes to Tab 2 "Infrastructure Costs".		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM	KP	Rolf	RT	Ready for Submission	At, June 22	Ready for Publishing
233	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Information Requirement	No	Tab T-2 does not contain notes regarding pump system redundancies. The notes in Appendix 7 (Pumping Costs) consist of screenshots of emails and figures and it is unclear where, if anywhere, these assumptions are detailed. Please indicate where redundancies for pump systems have been included in the cost estimate, or update the estimate accordingly. [Information Requirement]	Redundancy is within the design storage capacity of both the Open pit and the TSF. If a pump goes down then that capacity would be utilized until BW Gold could bring in additional pumping capacity from Prince George. Therefore, no additional cost estimate is provided for capital expenditures of standby pumps. Costs for operations and maintenance of the primary pumps is included.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
234	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	Please provide the following documents for review: a. BQE Water (2021). Water Treatment Plant (WTP) for Sulphate Control at Blackwater during Operation and Post-Closure: Capital and Operating Cost Report – Rev B. For Artemis Gold Inc., Vancouver, BC, from BQE Water, Vancouver, BC. b. McCue. (2021). Cost Estimate Summary for the Blackwater Gold Water Treatment Plan. McCue	Please see attached the two cited reports: "R1_EMLI_Reclamation Security Est_Comment ID 234 (part a).pdf" "R1_EMLI_Reclamation Security Est_Comment ID 234 (part b).pdf"		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 22	Ready for Publishing
235	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	QP Response Required	No	Please provide detailed water treatment costs with supporting rationale for each year water treatment is required (up to 100 years; Year +98) for the following cost items. The water treatment costs must be provided for the metals WTP, the lime neutralization WTP, and both membrane water treatment plants: Capital costs including:	Please see the attachment "R1_BC EMLI_Reclamation_Comment ID 235.pdf"		EMLI (K. Norlund, T.Antill, L.Murphy)	BQE	McCue	J. Huxtable	GM	Ready for Submission	GM; June 29	Ready for Publishing
235	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Comment	No	Post-closure water treatment costs for the Y+3 scenario were not included in the submission. Decommisioning costs for the operational Membrane WTP were also excluded from the submission. Further comment on water treatment costing for this scenario will be provided following receipt of this outstanding information. [Comment]	BW Gold has provided discussion in the updated RLCE Memo Section 6.9, and references ongoing work on near-term and long-term work plans.		EMLI (K. Norlund, T.Antill, L.Murphy)	BQE	McCue					
236	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Information Requirement	No	A Net Present Value (NPV) model can be applied to all post-closure monitoring, maintenance, site management, and water treatment plant operations costs. The NPV model cannot be applied to conventional reclamation activities, building/infrastructure removal activities, or capital costs related to water treatment. Please update the cost estimate, including providing updated undiscounted and discounted costs for the Year +3 and LoM closure scenarios.	Response pertains to Y+3 and LoM. The NPV calculations in the Cost Estimate have been updated to reflect the reviewers direction.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
236	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Nov 03, 2022	2	Follow Up	Comment	No	Closed. Please note that both the discounted and the undiscounted totals should be provided for each scenario. In the summary table provided, the undiscounted values of of the following costs were not provided, requiring manual calculation by reviewers: "Overall Costs", Mob/Demob, Project Management, Contingency, and the "Disturbed Area and Infrastructure Total". [Comment]	Comment acknowledged		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf				
237	Joint MA/EMA Permits Application Chapter 4	Reclamation Security Estimate	EMLI (K. Norlund, T.Antill, L.Murphy)		Jun 01, 2022	1	New	Comment	No	The Reclamation Liability Cost Estimate must be co-signed by the Mine Manager. Please ensure any updates to the RLCE are reviewed and signed off by the Mine Manager.	BW Gold will submit the updated Reclamation Liability Cost Estimate co-signed by the Mine Manager.		EMLI (K. Norlund, T.Antill, L.Murphy)	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
238	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Comment	No	The proponents and their consultants have indicated that various mine facilities/facility stages within the application are provided at a “Feasibility Study/For Information Only” level of design whereas the Joint Application Information Requirements for Mines Act and Environmental Management Act Permits1 JAIR requires detailed designs for mine facilities. The Chief Permitting Officer has provided direction regarding the level of design for new mines accepted for various mine facilities/facility stages. The level of design for the various mine facilities/facility stages in the Application is acceptable.	BW Gold acknowledges the comment and no further response is required.		EMLI (S. Morse, A.McPherson)	ERM		NA	RT	Ready for Submission		Ready for Publishing

239	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Comment	Yes	The number of inconsistencies and discrepancies identified within the Application are resulting in confusion, questions and uncertainly regarding the accuracy of the application and the analyses completed, resulting in longer than anticipated review time, and are anticipated to increase the difficulty of compliance activities with the permitted mine plan (i.e.. what is permitted?). The Application will be the basis of the Mines Act permit and any conflict or confusion within the Application documents will be carried forward to the drafting of numerous project-specific permit conditions and ongoing regulatory compliance assessments throughout the mine life (if permitted).	BW Gold acknowledges the comment and no response is required.		EMLI (S. Morse, A.McPherson)	ERM		NA	RT	Ready for Submission		Ready for Publishing
240	Section 1.1	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	The Executive Summary and Section 1.1 of the Application indicate that the "proposed Mines Act permit boundary" is shown on Figure 2 and Figure 1.1-2, respectively. The proposed Mines Act permit boundary (i.e.. proposed Permitted Mine Area (PMA)) cannot be located on either figure; provide the proposed PMA on Figures 2 and 1.1.-2 and confirm that the proposed PMA is included on all other figures as referenced within the Application.	Please see attachment "R1_EMLI_Geotech_Comment Responses 240, 342,370.pdf"		EMLI (S. Morse, A.McPherson)	ERM		Tonia/Rolf	RT	Ready for Submission		Ready for Publishing
241	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The Application includes several unlined water dam structures proposed to be constructed with 'Zone C' material. How has the potential for internal erosion been assessed for the unlined water ponds?	Please see attachment "R1_EMLI Geotech Comment IDs 241.pdf".		EMLI (S. Morse, A.McPherson)	KP		Michael/Dan	AT/KP	Ready for Submission	AT, June 14	Ready for Publishing
241	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	QP Response Required	No	The design engineer has indicated the dam design as possibly being incomplete and in the process of being substantially revised. EMLI requires that the designs of mining dams are correct and complete within the Mines Act Permit Application and supplementary documentation. Submit the revised designs for the unlined water dam structures.	Please see attachment "R2_EMLI Geotech Comment ID 241.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
241	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	QP Response Required	No	The response provided states, "The design basis and dimensions of the structures are complete in the Application, and the design intent and overall designs for the structures are not being substantially revised. Refinements to the design details for IFC design drawings are part of normal engineering processes to clarify the construction specifications." The response also states that, "The toe drain will be included if the seepage gradient at the downstream toe of the berm exceeds about 0.2 to 0.3… The estimated exit gradients for the ponds included in the application are typically around 0.35 or less without a toe drain at their maximum operating level." The addition of drains and changing of material specifications is not typically considered "refinement of design details." Based on the information provided in the response, it is unclear whether the designs as presented in the Application adequately mitigate internal erosion. Comment Repeated – It is expected that the designs of dams within the Mines Act Permit Application and supplementary documentation are complete. Submit the revised design reports and drawings for	Please see attachment "R3_EMLI Geotech Comment IDs 241 2160.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, Sep 20	Ready for Publishing
242	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Reviewers note that additional geotechnical investigations and assessments are required throughout the mine life. Provide a summary of required geotechnical investigations and assessments to be completed in the first five years of operations, including time frames.	Please see attachment "R1_EMLI Geotech Comment ID 242.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
242	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Potential Permit Condition and Comment	Yes	The following is a potential permit condition that would be applicable to: • TSF C above 1283 masl; • All stages of TSF D; and • Any substantial changes to the detailed designs received as part of this application. The permittee shall submit detailed designs, including supporting documentation, reports, studies, and assurance statements, prior to construction. Per 10.1.18 of the Code, substantial changes to the permitted designs require written authorization	BW Gold acknowledges the potential permit condition.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing

243	Appendix 3-B and 3-C	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement; Format as specified within comment	No	Several of the comments below identify mislabeling, inconsistencies and discrepancies within Section 3.5.1 of the Application (text and tables), Appendix 3-B (text and tables), and Appendix 3-C (text and tables). An example can be found on Table 3.5.1-5 which indicates a 70 m bench width and 10.7 degree inter-ramp angle in Slope Zone 1. Appendix 3-B and 3-C are understood to present the source for information for Section 3.5.1 of the Application. Based on the review and the resulting comments included below, Section 3.5.1 of the Application should be updated in time for start of Round 2 of Application review. It is EMLI's expectation that the Application is appropriately reviewed, and that the proponent's document quality control measures are implemented prior to submitting the Application to EMLI.	BW Gold acknowledges the comment. Responses have been provided for each for the mislabeling, inconsistencies, and discrepancies comments.		EMLI (S. Morse, A.McPherson)	ERM	BWG	with MMTS/KP input	RT	Ready for Submission	RT; June 20	Ready for Publishing
243	Appendix 3-B and 3-C	Geotechnical	EMLI (S. Morse, A.McPherson)			2	Follow Up	Information Requirement	No	Update Section 3.5.1 of the application with this and other clarifications/corrections and re-submit Section 3.5.1.	BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
244	Section 3.5.1.1	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 3.5.1.1 of the Application states, "these sedimentary rocks are the basement geological unit and are only found at the bottom of the pit with limited exposure in the pit walls." This unit is not identified in Figure 3.5-2, Projected Wall Geology and Fault Map, Ultimate Pit. Indicate where this unit is anticipated to be found and define what is considered "limited exposure in the pit walls"?	The sedimentary rock has no exposure on the currently proposed pit wall. See Figures 4.7 and 4.8 geological cross sections (Appendix 3-B).		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
245	Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	The fault information presented in Table 3.5.1-1 of the Application is mislabeled and inconsistent with the information presented in Table 4.2 of Appendix 3-B (both tables provide the summary of Open Pit Major Faults). Provide updated tables, as required. Please confirm the dip direction of faults EW-A and EW-N	Tables 4.2 of Appendix 3-B is correct. Table 3.5.1-1 is incorrect. Dip direction for faults EW-A and EW-N is NE. BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
245	Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Update Section 3.5.1 of the application with this and other clarifications/corrections and re-submit Section 3.5.1.	BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
246	Section 3.5.1.4	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.5.1.4 of the Application states, "The spatial distribution of the collected discontinuity data indicate that three structural domains exist within the region of the Open Pit, i.e.. Main, Northwest and Southeast domains (Figure 3.5-2)." a)Figure 3.5-2 presents the Ultimate Pit Wall Geology and Fault Map and identifies the 'West Structural Domain' and 'East Structural Domain'. Figure 3.5-2 does not delineate the structural domains as indicated (Main, Northwest and Southeast). Confirm the structural domains included on the figure indicated (Figure 3.5-2).	It should be two structural domains (East and West). The Section 3.5.1.4 text is incorrect. BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing

246	Section 3.5.1.4	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Update Section 3.5.1 of the application with this and other clarifications/corrections and re-submit Section 3.5.1.	BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
247	Section 4.2.2 (Appendix 3-B)	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Comment	No	b)Section 4.3.3 of Appendix 3-B states, "A review of the spatial distribution of the collected discontinuity data suggested that two structural domains exist within the region of the proposed open pit…the structural domains are referred as the West and East domains divided by the N Fault (see Figures 4.5 and 4.6)." Figure 4.6 is the same as referenced above Figure 3.5-2.	It should be two structural domains. Figures 4.5 and 4.6 of Appendix 3-B are correct.		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
248	Section 3.5.1.4	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 3.5.1.4 of the Application states, "Areas of intensely fractured rock (RQD<40%, mean = 38) were identified within all geological units and are classified as Broken Zones." and Table 3.5.1-2 presents the 'Broken Zone' 'RQD Average' as 9%. Clarify the discrepancy between the reported values.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
249	Table 3.5.1-3 of the Application, Pit Slope Factor of Safety Acceptance Criteria	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Table 3.5.1-3 of the Application, Pit Slope Factor of Safety Acceptance Criteria, indicated that the selected 'Consequences of Failure' as 'Medium" for inter-ramp and overall slopes. Provide justification for the selection of 'Medium' 'Consequences of Failure'	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
250	Appendix 3-C	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	The information presented in Table 3.5.1-5 of the Application, Open Pit Design Slope Sectors for Development, is inconsistent with the information presented in Table 3.5.1-4, Recommended Pit Slope Configurations for Final Pit, and Table 2-2 of Appendix 3-C which is the source for the information presented in Table 3.5.1-5. Clarify the discrepancy between the reported values.	The information presented in Table 3.5.1-4 of the Application are the geotechnical domains and recommendations for the pit slope configurations for the final pit, which come from Table 7.1 of the Open Pit Slope Design Report in Appendix 3-B. The pit designer, Moose Mountain Technical Services (MMTS), created 3D slope sector zone solids to support the phased development of the open pit that were based on the geotechnical domains described in Appendix 3-B and summarized in Table 3.5.1-4. The generalized pit geometry based on these slope sectors is presented in Table 3.5.1-5 of the Application and Table 2.2 of Appendix 3-C.		EMLI (S. Morse, A.McPherson)	KP	MMTS	Daniel Yang, Marc	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
250	Appendix 3-C	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Update Section 3.5.1 of the application with this and other clarifications/corrections and re-submit Section 3.5.1. It is noted that Table 3.5.1-5 of the Application presents inter-ramp angles (IRA) of 10.7° to 14.2°, which is inconsistent with the design presented in other areas of the Application. Please clarify which pit slope design is proposed. This should be addressed, along with the other clarifications and corrections, with an updated Section 3.5.1 of the Application.	Please see response to follow-up comment 251. BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP	ERM	Daniel	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
251	.1.5, Appendix	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.5.1.5 of the Application, Appendix 3-B and Appendix 3-C present two different Open Pit slope configurations/designs. As per the Joint Application Information Requirements for Mines Act and Environmental Management Act Permits2 (JAIR), the application must include detailed designs, meaning that the submitted design is supported by all necessary analyses and assessments and represents what will be constructed (except for field-fitting and other non-substantial changes). Confirm which design is proposed for construction in the Application and ensure that all supporting investigations, analyses, and designs are provided and properly signed and stamped for the option propose in the Application.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf". BW Gold will provide an updated Section 3.5.1 in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP	MMTS	Daniel Yang, Marc	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
251	.1.5, Appendix	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up		No	Comment not addressed. Section 3.5.1 of the Application has not been updated and resubmitted for Round 2 of Application review. Confirmation of which design and supporting report is proposed is not included in the response. The comment provided is in reference to observed discrepancies in the pit slope configurations/designs presented in Tables 3.5.1-4 and 3.5.1-5, Figures 3.5-7 and 3.5-8 of the Application, and Appendix 3-B and Appendix 3-C. For example, Figures 3.5-7 and 3.5-8 identify different IRAs for the same sector (Upper Slopes of the North Sector (40° on Figure 3.5-7); Slope Zone 2 (35° on Figure 3.5-8).	The pit slope designs presented in Appendix 3-B included the most recently collected site investigation data and geotechnical analysis for the proposed pit. This document will be used by BW Gold moving forward as the basis for future pit designs upon the commencement of construction at the site. As indicated in Section 8 (Appendix 3-B), additional geotechnical work will be required prior to pit development, including further site investigations, point load testing, detailed laboratory testing, and refinement of the pit hydrogeological model and pit dewatering plan. With this additional data, further refinements of the pit slope designs may result. The pit designs presented in Section 3.5.1 and Appendix 3-C of the Application rely on the earlier pit slope		EMLI (S. Morse, A.McPherson)	KP	MMTS, ERM	Daniel	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing

252	Section 3.5.1.7, Section 7.2.2 (Appendix 3-B)	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.5.1.7 of the Application states, “Surface water diversions are not proposed upslope of the pit excavation due to the limits contribution catchment area and therefor there are no applicable surface water diversion design criteria for this project component to include in the Joint Application.” Section 7.2.2 of Appendix 3-B states, “The slope depressurization measures include on-pit and perimeter vertical pumping wells, as well as diversion ditches along the pit crest of the slopes.’ and ‘The following mitigation measures should be considered as part of pit operations, to reduce and/or eliminate the consequences of the potential in-pit geohazards: constructing perimeter diversion ditches wherever appropriate to prevent and/or reduce surface runoff from entering the pit.” These two sections of the Application seem to contradict each other. Provide documentation from the pit Design Engineer whether diversion ditches are recommended above the open pit. If so, provide a design for the diversion ditches.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
252	Section 3.5.1.7, Section 7.2.2 (Appendix 3-B)	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	The following permit condition, if permitted, is anticipated to be included in the M-246 Mines Act permit: The Permittee must ensure that surface water is diverted away from the pit slopes in accordance with the recommendations of a Professional Engineer.	BW Gold acknowledges the potential permit condition, and suggests that the final wording should indicate that surface water is managed in accordance with the recommendations of a Professional Engineer.		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
253	Table 3.5.1-8, Table 6.2 (Appendix 3-B)	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Table 3.5.1-8 of the Application and Table 6.2 of Appendix 3-B provides pit slope depressurization requirements for the East, Southeast, Southwest, North, and Northeast Wall Sectors with the amount of “horizontal slope depressurization required (m)” provided for various years as ‘120’, ‘50 below 1,300 masl’, ‘120 above 1,440 masl’, and others. Clarify what the ‘horizontal slope depressurization required (m)’ values mean, including reference points (i.e.. is the phreatic surface required to be 120 m behind the pit slope at all locations above 1,440 masl?).	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
254	Section 3.5.1.7	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.5.1.7 of the Application states, “Additional mitigation measures will be provided that include horizontal or vertical drainage measures if the required slope depressurization requirement are not sufficiently met by the in-pit wells by the target date in mid to late Operations phase.” Provide triggers to identify when the ‘additional mitigation measures’ will be implemented and the anticipated times/pit phases/elevations for implementation of ‘additional mitigation measures’?	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
255	Tables 5.4 and 5.5 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Provide the supporting analyses used to prepare Tables 5.4 and 5.5 of Appendix 3-B (complete kinematic analyses).	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing

255	Tables 5.4 and 5.5 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement and QP Response Required	No	a) Comment not fully addressed. Provide all additional supporting analyses including, but not necessarily limited to, planar and toppling analyses. If further analyses were determined to not be required, provide the rationale. b) The surface wedge analyses indicate the wall orientations of 180° and 230° and a bench face angle of 70° have PoF of 100% in the North Sector. This appears to be inconsistent with the information provided in Table 5.4 of Appendix 3-B which indicates that wall orientations of 180° and 230° and bench face angles of 70° and 80°, respectively, have PoF of 25%. Please clarify the apparent inconsistency and provide any proposed mitigation measures, if required. [QP Response Required]	Please see attachment "R2_EMLI Geotech Comment IDs 255 262-264 270.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
256	Section 5.6.3 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 5.6.3 of Appendix 3-B states, "Three strength cases were developed after examining the intact field strength estimates, laboratory testing, comparisons to rock strength envelopes developed by Leps (1970), and previous experience by KP." Provide the basis for development of the strength parameters used in the sensitivity analyses presented in Table 5.8 and justification for selection of Case 2.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
257	9 and 5.10, App	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Provide the supporting analysis used to prepare Tables 5.9 and 5.10.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
258	Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Describe how and where the disturbance factor (D) was applied in the analyses including, but not necessarily limited to, what disturbance factor(s) were applied at various locations (i.e.. at a distance from the excavated surface, for the entire rock mass, etc...) and geologies (i.e.. is there more disturbance in the Broken Zone than in Competent Rock).	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
259	Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The inferred faults do not appear to be included in the slope stability analyses presented in Appendix B of Appendix 3-B. Describe how the inferred faults were considered in the inter- ramp and overall slope limit equilibrium stability analyses. If they weren't considered provide justification.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
260	Appendix B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	The slope stability analyses included in Appendix B do not have units associated with the x and y axis. Clarify the units for the x and y axis.	The x-axis and y-axis units are in meters.		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
261	5.6.4.2 of Appe	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 5.6.4.2 of Appendix 3-B, Year 5 Interim Pit Wall Stability Analyses, states, "A geotechnical step-out (approximately 35 m wide) is recommended for the Broken Zone slope to effectively flatten the overall slope angle of the interim Southwest wall." Provide the location and configuration of the step-out and a revised figure/stability analysis, if required.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing

262	Section 5.6.4.3 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 5.6.4.3 of Appendix 3-B states, "A geotechnical step-out is recommended for the Broken Zone slope to effectively flatten the overall slope angle of the interim Southeast wall. However, the FOS of the interim Southeast Wall still does not meet the 1.3 target for the overall slope."	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
262	Section 5.6.4.3 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	QP Response Required	No	Comment not addressed. Neither the pit slope design report nor the supplemental information presented in the responsive document demonstrates that the target FOS is achieved or provides justification for proposing a pit slope design below the target FOS. Comment repeated – 'Provide a pit slope design report that satisfies the target FOS or provide justification for proposing a pit slope design below the target FOS.'	Please see attachment "R2_EMLI Geotech Comment IDs 255 262-264 270.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
263	Appendix B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The Southwest design sector of the 10 year pit does not meet the target minimum inter-ramp FOS of 1.2 (Appendix B, page 10). EMLI expects final and interim pit slopes will meet minimum design criteria including, but not limited, to FOS. Provide a pit slope design report that satisfies the target FOS or provide justification for proposing a pit slope design below the target FOS.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
263	Appendix B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	QP Response Required	No	Comment not addressed. Neither the pit slope design report nor the supplemental information presented in the responsive document demonstrates that the target FOS is achieved or provides justification for proposing a pit slope design below the target FOS. Comment repeated – 'Provide a pit slope design report that satisfies the target FOS or provide justification for proposing a pit slope design below the target FOS.'	Please see attachment "R2_EMLI Geotech Comment IDs 255 262-264 270.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
264	Appendix B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The Southwest design sector of the 18 year pit does not meet the target minimum inter-ramp FOS of 1.2 (Appendix B, page 20). EMLI expects final and interim pit slopes will meet minimum design criteria including, but not limited, to FOS. Provide a pit slope design report that satisfies the target FOS or provide justification for proposing a pit slope design below the target FOS..	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
264	Appendix B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	QP Response Required	No	Comment not addressed. Neither the pit slope design report nor the supplemental information presented in the responsive document demonstrates that the target FOS is achieved or provides justification for proposing a pit slope design below the target FOS. Comment repeated – 'Provide a pit slope design report that satisfies the target FOS or provide justification for proposing a pit slope design below the target FOS.'	Please see attachment "R2_EMLI Geotech Comment IDs 255 262-264 270.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
265	Table 5.15	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Provide the analyses used to prepare Table 5.15.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
266	Section 6.3.1 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 6.3.1 of Appendix 3-B states, "Surface water dewatering systems for the Project were designed by MMTS…and are not discussed in this report." What 'surface water dewatering systems' are being referenced?	The surface water dewatering systems being referenced included the in-pit pumping systems and any potential perimeter diversion ditches, if applicable. It is understood that MMTS determined that ditches were not required due to the small catchment areas upstream of the south pit rim.		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
267	6.4 of Append	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Table 6.4 of Appendix 3-B provides pumping well locations, and timing for installation and decommissioning. Provide the locations, and timing for installation and decommissioning of observation wells including, but not necessarily limited to, OW-1 through OW-18.	The location of observation wells OW1 through OW18 are shown on Figure 6.1 of Appendix 3-B, and the timing of installation of these observation wells is described in Section 6.3.2. Thirteen observation wells (OW1 through OW13) are planned to be installed around the open pit perimeter between Years +1 and +3, and five additional observation wells (OW14 to OW18) on the northern edge of the ultimate extent of the open pit are planned for Year +4. Decommissioning of the observation wells will be completed following Closure, at a time when water level data collected at the observation sites are deemed to no longer be of interest.		EMLI (S. Morse, A.McPherson)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
268	Section 6.4 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 6.4 of Appendix 3-B presents the overburden dewatering requirements. How long is the overburden anticipated to take to dewater and how was this considered in pit development?	The southeast corner of the ultimate open pit includes overburden that is about 100 m thick and inferred to extend out a distance from the pit of about one kilometer. The overburden in this area is mapped as lodgement till. Much of the overburden in the southeast corner of the open pit will be excavated over a period of about five years. Open pit dewatering is planned to begin at existing dewatering wells in Year -1, and installation of additional perimeter dewatering wells in bedrock is planned in Year 4 to meet mine dewatering requirements. These existing and proposed wells will provide some underdrainage of the till slopes. Horizontally flowing groundwater will provide additional natural drainage along the slopes as the slopes are excavated. Without additional actions, adequate drainage of the overburden is expected in a time frame of less than five		EMLI (S. Morse, A.McPherson)	KP		Cindy	AT/KP	Ready for Submission	AT, June 23	Ready for Publishing
269	Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	How will erosion of the open pit overburden slopes be mitigated during operations and closure?	A wider bench located immediately below the overburden/bedrock contact was incorporated into the pit design to manage surface runoff and to contain any eroded materials from upper overburden slopes.		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing

270	Table 7.1 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Clarify how the overburden slope design presented in Table 7.1 of Appendix 3-B meets the pit slope FOS acceptance criteria presented in Table 5.2 of Appendix 3-B (FOS (min) (Static) of 1.1; POF (max P[FOS≤1] of 25% - 50%).	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
270	Table 7.1 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide the analyses which support the statement 'A fully saturated condition is unlikely. Given an Ru value ranging between 0 and 0.15, in between fully drained and 33% saturated conditions, the computed Probability of Failure (POF) for a 110 m high, 27-degree overburden Page 9 of 16 slope is below 20% and meets the acceptance criteria presented in Table 5.2 of Appendix 3-B.'	Please see attachment "R2_EMLI Geotech Comment IDs 255 262-264 270.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
271	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Were back break analyses completed in the Broken Zone and Competent Rock? If so, provide the back break analyses and identify the effective bench width in the Broken Zone (developed with 14.5 m benches as per Table 7.1) and Competent Rock (developed with 9, 10, 11 and 14 m benches as per Table 7.1). If back break analyses were not completed, provide justification.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
272	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Part 6.23.1 of the Code requires, "All trees and other vegetation, clay earth, sand, gravel, loose rock, or other unconsolidated material lying within 2 m of the rim of a working face or a wall in the in a surface mine shall be removed, and beyond this distance all unconsolidated material shall be sloped to an angle less than the natural angle of repose." Describe how Part 6.23.1 of the Code will be satisfied.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
272	Table 7.1 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Comment	No	EMLI reviewers expect the 'overall site preparation plan' referenced in the proponents' response to be in compliance with the Code and Mines Act permit (if permitted).	BW Gold acknowledges the comment.		EMLI (S. Morse, A.McPherson)	KP		Daniel	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
273	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Were seismic stability analyses completed for the Open Pit? If so, provide the analyses. If not, provide justification.	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
274	Section 7.1.2 of Appendix 3-B	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 7.1.2 of Appendix 3-B states, "If the position of the haul roads is modified significantly from those presented in this report, the pit slope recommendations may no longer be valid in these areas and stability checks are recommended to verify that the overall slope stability has not become a design constraint." Provide open pit figures which clearly indicate the haul road considered in the design and step out locations and geometries	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
275	7.2.3 of Apper	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 7.2.3 of Appendix 3-B identifies several in-pit geohazard mitigation measures. Which mitigation measures will be implemented and when will they be implemented?	Please see attachment "R1_EMLI Geotech Comment ID 248-249 251-259 261-265 270-275.pdf".		EMLI (S. Morse, A.McPherson)	KP		Daniel Yang	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
276	Section 4.1 of Appendix 3-C	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Comment	No	Section 4.1 of Appendix 3-C state, "Haul Roads are limited to 10%, except for the bottom two benches of the pit, where grades are increase to 12%." Section 6.9.2 of the Code states, "On roadways where the grade exceeds 5% the manager shall have installed and maintained runaway lanes or retardation barriers where conditions/risk warrant.'	BW Gold acknowledges the comment.		EMLI (S. Morse, A.McPherson)	MMTS		Marc S	AT	Ready for Submission	AT, June 19	Ready for Publishing
277	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	Comment	No	On hold. Response will be informed by the information provided in response to EMLI Round 2 Comments #50 (ID #288) and #130.	BW Gold acknowledges the comment.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
277	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Have external reviewers and/or an independent review board reviewed the Dam Site Characterization Reports (including, but not necessarily limited to, Appendix 3-L and the interpretation presented in Appendix 3-Z)? If so, please describe the independent reviews that were completed (i.e.. specialists undertaking the review, areas of expertise, scope, areas of review, level of review, etc...), provide a summary of recommendations resulting from the review and how these recommendations were	Please see attachment "R1_EMLI Geotech Comment IDs 277 288.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
278	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The Executive Summary of Appendix 3-L recommends, "field verification of 2012-2013 drillhole logs, to the extent practicable, to confirm revised interpretation." Reviewers note that four drillholes were verified. Provide a summary of how the verified drillholes compare to the original drillholes and how this influenced how the data obtained from the unverified drillholes was used in characterization.	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/James	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
279	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Table 2.1 of Appendix 3-L includes labels "R" and "P" for types of hydraulic conductivity tests. Please clarify what types of tests these labels refer to.	P - Packer Testing, R - Response Testing, AL - Airlift Testing.		EMLI (S. Morse, A.McPherson)	KP		Jordan/Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
280	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Table 2.2 of Appendix 3-L indicates that two oedometer tests were completed, one at the TSF C Main Dam and one in the TSF C basin; the material tested and test results (Overconsolidation Ratio, OCR) cannot be located. Identify the material tested, provide the test results (OCR) and indicate how these test results have been used in site characterization.	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing

281	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Appendix 3-Z indicates that one in-situ Pressuremeter Test (PMT) was completed in glaciolacustrine material, resulting in an OCR of 4.1. Figure A1.9 in Appendix A of Appendix 3-L indicates that nine glaciolacustrine units have been identified on site, at various locations and elevations. Provide justification as to why the investigations completed are suitable for characterizing the glaciolacustrine material on site. What additional characterization of the glaciolacustrine material is anticipated or has been recommended?	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
282	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	There is limited information presented regarding the Reworked Regolith foundation material. What additional characterization of the Reworked Regolith is anticipated or has been recommended?	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
283	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Table 5.5 of Appendix 3-L indicates that six geotechnical laboratory tests were completed, two in materials identified as glaciolacustrine and two identified as till (no reference to till type). Where were these samples taken and how do the laboratory test results compare to in-situ test results?	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
284	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Table 5.5 of Appendix 3-L shows Consolidated Undrained Triaxial Testing results for the Ablation Till, Lodgement Till and Undifferentiated Till combined. Please clarify what these results represent.	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
285	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Figures A1.8 and A1.9 in Appendix 3-L indicate that both drillholes are located at/near the TSF C starter embankment, with GT20-01 intersecting the 1196 m - 1204 m glaciolacustrine unit and the 1191 m – 1197 m glaciofluvial unit, and GT19-01 intersecting the 1231 m – 1239 m glaciolacustrine unit. Figures B2.1 and B2.3 in Appendix 3-Z present the SCPT analysis for geotechnical drillholes GT20-01 and GT19-01, respectively, with glaciolacustrine (GT20-01 (one point) and GT19-01) and glaciofluvial (GT19-01)	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
285	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	QP Response Required	No	EMLI reviewers note that the response to this comment and comment 44 (ID #283) states that "Sensitivity analyses using a GLU undrained strength of approximately 0.25 to 0.05 were also considered based on the values determined for the 1% of the data points indicating contractive behavior during CPT." The sensitivity analyses for Stages 1 and 2 of Main Dam C presented in Appendix 3-L applies an undrained shear strength of 0.2, not 0.25 to 0.05 as indicated in other areas of	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
285	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29- September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
286	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 7.3 of Appendix 3-L states, "The level of investigation at MDD is suitable to support the preliminary design for the Permit Application, and additional investigations will be required prior to detailed design of MDD." Other information provided states that TSF D is at Feasibility level of study. Confirm the level of design provided in the Application for TSF D.	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
286	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	Comment	No	Generally, the terms 'preliminary design', 'feasibility design' and 'for information only' are not considered interchangeable, particularly when submitting documentation to a regulator. Although, the EGBC Professional Practice Guideline, "Site Characterization for Dam Foundations in BC,"1 notes that Preliminary Design can be associated with either Pre-feasibility, or Feasibility level designs, many commonly referenced industry guidelines provide guidance/expectations for Pre-Feasibility, Feasibility, and Detailed design phases for the development of mining projects. Different design phase terms within a single project would generally be expected to indicate different design phases. This comment is considered closed.	BW Gold acknowledges the comment.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
287	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Figure A1.11 in Appendix A of Appendix 3-L indicates that the bedrock in the area of Main Dam C and Main Dam D is Eocene Ootsa with Eocene Intrusions, while Figure 3.3 appears to show that the bedrock in the area of Main Dam C and Dam D is Upper Cretaceous - Kasalka Group. Figure 3.3 shows an "unknown fault" in the area of the foundations of Main Dam C and Main Dam D. Figure A1.11 also shows an "inferred fault" in the area of the foundations of Main Dam C and Main Dam D, although at a	Please see attachment "R1_EMLI Geotech Comment IDs 278 280-287.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
288	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Have external reviewers and/or an independent review board reviewed the TSFs designs? If so, please describe the independent reviews completed (i.e.. specialists undertaking the review, areas of expertise, scope, areas of review, level of review, etc...), provide a summary of recommendations resulting from the review and how these recommendations were implemented. If an independent review was not completed, please provide rationale	Please see attachment "R1_EMLI Geotech Comment IDs 277 288.pdf".		EMLI (S. Morse, A.McPherson)	KP	BWG	Dan,??	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
288	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	QP Response Required	No	a) Please identify the TSF C and D configuration(s) and location(s) considered for each of the independent reviews listed in the response. EMLI reviewers note that the most recent reviews completed by BGC (led by Iain Bruce, P.Eng.) and the ITRB (Bryan Watts, P.Eng. with KCB, Stephen Day, P.Geo. with SRK, and Leslie Smith, P.Geo.) were completed in 2016, when the configuration and location of TSF C appears to be substantially different than that included in the Application. b) If independent reviews were not completed for the TSF configuration included in the Application, provide rationale. c) Has there been any follow up with independent reviewers since 2016? This may include, but not limited to, evaluation of how the independent reviewers' recommendations were addressed or the plans to address them?	Please see attachment "R2_EMLI Geotech Comment ID 288.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
288	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	QP Response Required	No	a) closed b) i.The response provided was focussed on the independent reviews completed; please respond to the comment in consideration of the external reviews completed (e.g., reviews completed by BGC (led by Iain Bruce, P.Eng.)). [QP Response Required] ii.The response provided states, "The location of the TSF is unchanged from the TSF reviewed by the New Gold ITRB in 2016." Part a) of the response states that Main Dam C "was moved downstream resulting in the maximum dam height increasing." The location and configuration of the TSFs in the Application have been changed from the 2016 location and configuration due to the modified location	Please see attachment "R3_EMLI Geotech Comment IDs 288 2079.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, Sep 16	Ready for Publishing

288	Appendix 3-L	Geotechnical	EMLI (S. Morse, A.McPherson)		Oct 12, 2022	4	Follow Up	Potential Permit Condition	Yes	a)Closed b) Closed c) If permitted, independent review of the Blackwater TSF is anticipated to be included as a Permit Condition. [Potential Permit Condition]	BW Gold acknowledges the comment.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Oct 26	Ready for Publishing
289	Section 9.12 of the JAIR	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	Yes	Section 9.12 of the JAIR requires, "In accordance with Section 10.4.2.1.e of the Code, integrate the TSF emergency preparedness and response plan into the MERP." Demonstrate how these requirements are satisfied within the Application.	A TSF Emergency Preparedness and Response Plan has not yet been developed for the Blackwater Project. As such, there is no integration of it into the MERP. While Section 9.12 clearly lists this integration as a requirement of the Application, BW Gold suggests that this requirement of the JAIR should rather become a permit condition, with a date that it be available some time prior to the commencement of the Operations phase, as opposed to a requirement of the Application itself. The rational for this suggestion is that much of the information required to develop a TSF Emergency Preparedness and Response Plan is not yet available for this greenfield site. The listed section of the Code (10.4.2) relates to Tailings Governance, including		EMLI (S. Morse, A.McPherson)	BWG			RT	Ready for Submission	RT; June 29	Ready for Publishing
289	Section 9.12 of the JAIR	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	The following permit condition, if permitted, is anticipated to be included in the M-246 Mines Act permit: Page 11 of 16 The Permittee must submit Emergency Preparedness and Response Plans to the Chief Permitting Officer for TSFs and dams prior to commencement of construction of TSFs and dams. The TSF and dam	Thank for you for insight about a potential permit condition. As suggested in the R1 response to this comment, BW Gold suggests that it is more approriate to provide the Emergency Preparedness and Response Plans (EPRPs) for the Tailings Storage Facility (TSF), suitably integrated into the Mine Emergency Response Plan (MERP), to the Chief Permitting Officer prior to the		EMLI (S. Morse, A.McPherson)	BWG	KP	Klaus/Alastair	RT	Ready for Submission	AT, Aug 10	Ready for Publishing
290	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Provide cross sections of TSF C and TSF D (combined) demonstrating tailings and waste rock deposition and embankment raises over the life of mine. Figures similar to drawing G0105 of Appendix F in Appendix 3-K are suitable.	Please see attachment "R1_EMLI Geotech Comment ID 290.pdf".		EMLI (S. Morse, A.McPherson)	KP	KP	Dan	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
291	Section 3.5.3.4	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.5.3.4 of the Application states, "Artesian conditions were encountered at the northwestern part of the dam alignment." What is the interpreted extent of the artesian conditions?	Please see attachment "R1_EMLI Geotech Comment IDs 291 292 296 307 315 317.pdf"		EMLI (S. Morse, A.McPherson)	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 16	Ready for Publishing
292	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	How have the artesian conditions been accounted for in the TSF C analysis and design?	Please see attachment "R1_EMLI Geotech Comment IDs 291 292 296 307 315 317.pdf"		EMLI (S. Morse, A.McPherson)	KP		Jordan/Cindy /Joseph	AT/KP	Ready for Submission	KP, June 16	Ready for Publishing
293	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 2.8 of Appendix 3-J states, "During construction, it is recommended Terrain Stability Assessments be undertaken where earthworks and/or vegetation clearance are planned in mapped areas of 'potentially unstable' and 'unstable' terrain. The TSAs should adopt a risk- based approach to determine the extent of any necessary temporary mitigation measures..." What types of "temporary mitigation measures" are anticipated?	The types of temporary mitigation measures could include additional control of surface and subsurface water, adjustment to construction methods and activity sequencing, adjustment to cut and fill design slope angles, and temporary support/stabilization (e.g. buttressing, soil nailing, rock bolting, etc...).		EMLI (S. Morse, A.McPherson)	KP		Dan/James	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
294	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 4.4.2 of Appendix 3-J states, "The target heights of these initial fill areas and associated standby pumping capacity shall be selected by BW Gold and the Constructer based on risk tolerances and liability assignment." Table 4.3 provides a table of return periods, inflows and, "Minimum Required Height" for "Initial Fill Placement" for the Mine Area Creek and Davidson Creek Diversions. Is it anticipated that water would accumulate behind the initial fill areas under normal operating conditions	Yes, that is the design intent. Minor accumulated flows will be managed by the construction contractor with temporary pump systems and flow will be conveyed to the pond upstream of the diversion berm and subsequently diverted by the Davidson Creek Diversion System. Once PAG waste rock placement commences between the Diversion Berm and Davidson Creek Initial Fill Placement Area, water will be allow to accumulate and saturate the voids of the PAG waste rock		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
295	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Provide a drawing which clearly presents the location of the "Initial Fill Areas" specifying, which is the Mine Area Creek and Davidson Creek Diversion, or advise where this is located within the Application.	The locations and designs are shown on Drawings C1100 (both), C1120 (Davidson Creek Initial Fill Placement Area), and C1121 (Mine Area Creek Initial Fill Placement Area) in Appendix D of Appendix 3-J.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
295	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Drawing C1100 does not identify which "Initial Fill Area" is the Mine Area Creek or Davidson Creek Diversion, and Drawings C1120 and C1121 do not provide reference points to clearly identify the location of each structure. Provide a drawing which clearly presents the location of the "Initial Fill Areas" specifying, which is the Mine Area Creek and Davidson Creek Diversion.	Please see attachment "R2_EMLI Geotech Comment ID 295.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
296	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 4.4.2 of Appendix 3-J, states, "Both areas of initial fill placement are shown with a design height of 8.4 metres..." Based on the section provided on Drawing C1121, the minimum height shown for the Mine Area Creek initial fill appears to be approximately 6 metres. Please clarify how the minimum embankment height is measured, and what event the Mine Area Creek initial fill embankment constructed to 1242 m elevation would accommodate with adequate freeboard.	Please see attachment "R1_EMLI Geotech Comment IDs 291 292 296 307 315 317.pdf"		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 16	Ready for Publishing

297	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 5.7.2 of Appendix 3-J states, “The Stage 1 and 2 spillways are not anticipated to be operational due to the TSF capacity at 1273 masl and the anticipated waste/water storage volumes. Erosion protection has therefore not been designated for the remainder of the spillway outlet channels. In the event of a mine premature closure, the emergency spillways may become operational in nature. If this occurs, the installation of erosion protection materials will be required for the full outlet channel lengths.” Provide clarification regarding how the determination was made that the Stage 1 and 2 spillways are not anticipated to be operational and justification for the absence of erosion protection materials for the full channel length.	Please see attachment "R1_EMLI Geotech Comment ID 297.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jeremy/Dan	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
298	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Appendix C1.2 of Appendix 3-J states, “There are no drillholes or test pits completed directly within the Diversion Berm footprint due to the incised nature of Davison Creek and confirmatory drilling should be performed during construction to verify the conditions assumed for design.” How has this uncertainty been accounted for in the analyses carried out to date and the design?	Please see attachment "R1_EMLI Geotech Comment IDs 298-301.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	AT, June 14	Ready for Publishing
299		Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	What contingencies have been considered in case the ground conditions within the Diversion Berm footprint are not consistent with the conditions assumed for design?	Please see attachment "R1_EMLI Geotech Comment IDs 298-301.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	AT, June 14	Ready for Publishing
300	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Appendix C5.2 of Appendix 3-J states, “Ground conditions should be verified during construction as there are no drillholes or test pits that were completed directly within the SCP footprint.” How has this uncertainty been accounted for in the analyses carried out to date and the design?	Please see attachment "R1_EMLI Geotech Comment IDs 298-301.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	AT, June 14	Ready for Publishing
301		Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	What contingencies have been considered in case the ground conditions within the SCP footprint are not consistent with the conditions assumed for design?	Please see attachment "R1_EMLI Geotech Comment IDs 298-301.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	AT, June 14	Ready for Publishing
302	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 3.5.3.11 of the Application states, "The tailings distribution infrastructure will be expanded in Year +5 with the addition of a secondary line to the southwest end of TSF C (approximately 4,700 m in length), as well as two pipelines to convey tailings along the crest of Main Dam C to discharge into the northeast side of the TSF (approximately 7,300 m long each) in Year +6." While Appendix 3-K, Section 5.2.3 states, "The tailings distribution system will be extended along the crest of Main Dam C during	Tailings discharge from the crest of Main Dam C will begin in approximately late Year +6 or Year +7 when waste rock placement in TSF C has ceased.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
303	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 5.3.2 of Appendix 3-K provides the design features of Main Dam C, including "Water- retaining earthfill seal zone (Zone S) for Stages 1 to 6" and "HDPE geomembrane facing for Stages 7 to 11." Provide details for the transition between the earthfill seal zone and the HDPE geomembrane facing?	Please see attachment "R1_EMLI Geotech Comment IDs 303 304 314 318.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 21	Ready for Publishing
304	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Sections 5.4.2 and 5.5.2 of Appendix 3-K provide design features for the Saddle Dam and West Dam respectively, including "HDPE geomembrane facing" and "Upstream HDPE basin liner." Provide details regarding the tie in between the HDPE geomembrane facings and upstream basin liners into the embankment abutments and TSF basin?	Please see attachment "R1_EMLI Geotech Comment IDs 303 304 314 318.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 21	Ready for Publishing
305	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 5.2.1 of Appendix 3-K states, "TSF C was sized to contain approximately 232 Mm^3 of tailings, 32 Mm3 of waste rock, and a supernatant pond volume ranging from 1 to 10 Mm^3." Table 5.1 lists the total capacity of TSF C as 305 Mm^3. Clarify the discrepancy in the total volume from Section 5.2.1 compared to the capacity from Table 5.1.	The total available storage capacity in the TSF C is approximately 305 Mm^3, which is the sum of 232 Mm^3 of tailings, 32 Mm^3 of waste rock, a supernatant pond volume ranging up to 10 Mm^3, the 3 Mm^3 seasonal inflow allowance, 22 Mm^3 of IDF storage, and 6 Mm^3 air space within the minimum dry freeboard.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
306	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 9.3.1 of Appendix 3-K states, “Facilities that do not include defined threshold conditions and response plans below were deemed not to require these at this time…” Provide a list of the structures that were not deemed to require QPOs and TARPs with the justification for this decision for each structure.	Please see attachment "R1_EMLI Geotech Comment ID 306.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
307	Section 7.0 of Appendix D1 in Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 7.0 of Appendix D1 in Appendix 3-K states, "The total available storage for the tailings waste rock and supernatant water in the TSF for the ultimate arrangement for the 2016 dam breach assessment was comparable to the approximately 480 Mm^3 currently contemplated." Table 5.1 lists the total capacity of TSF C as 305 Mm^3, and Table 6.1 lists the total capacity of TSF D as 225 Mm^3. Together these total 530 Mm^3. Appendix 3-W, Section 3 states, “The total available storage for the tailings, waste rock and supernatant water in the TSF for the Site D ultimate arrangement will be 465	Please see attachment "R1_EMLI Geotech Comment IDs 291 292 296 307 315 317.pdf"		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 16	Ready for Publishing
308	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.1 of Appendix E2 in Appendix 3-K states, “Tailings will initially be discharged into TSF C from one or more points on the west side of the facility with the PAG/NAG3 waste rock disposed of directly upstream of Main Dam C during the first six years of operations.” Provide a placement methodology for the PAG/NAG3 waste rock within TSF C.	Please see attachment "R1_EMLI Geotech-Geoscience Comment IDs 308 316 389.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
309	Appendix 3-G Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 3.1 of Appendix 3-G in Appendix 3-K states, "Water generated from pit dewatering activities and contact water collected at the waste stockpiles will be directed to a pond at the plant site." Which pond is this?	The Metals Water Treatment Plant influent pond.		EMLI (S. Morse, A.McPherson)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
310	Appendix 3-G Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 3.2.4 of Appendix 3-G in Appendix 3-K states "The nominal volume in Post-Closure will be determined by the elevation of the outlet to the closure spillway." Is there a design for the closure spillway?	A design for the closure spillway was not developed as part of the Application. Design effort was focused on emergency spillways that are required as part of the initial construction activities, or for features required in the first five years of operations. Those include: - Davidson Creek Diversion System (Appendix 3-J) - TSF Stage 1 SCP (Appendix 3-J) - The IECD (Appendix 3-J) - Stages 1 & 2 of Main Dam C (Appendix 3-J) - The WMP (Appendix 3-J) - The ECD (Appendix 3-K) - Northern Water Transfer Pond (Appendix 3-K) - The FWR (Appendix 3-O)		EMLI (S. Morse, A.McPherson)	KP		Greg/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

311	Appendix 3-G Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Table 3.3 of Appendix 3-G in Appendix 3-K include the entry for Year 24 onwards has a superscript 1 and 2, generally indicating clarifying notes for a table. There are no notes under the table. Provide any applicable notes to accompany the table.	The notes should have been the same as the notes provided for Table 4.6 of Appendix 5-B. The notes are: (1) The nominal TSF C Pond volume is maintained near 2 Mm^3 during Closure by pumping water to the pit lake. (2) The nominal TSF C Pond volume in Post-Closure will be determined by the elevation of the outlet to the TSF C closure spillway.		EMLI (S. Morse, A.McPherson)	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
312		Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Figure 3.2 of Appendix 3-G in Appendix 3-K includes note 1 which states, "The TSF Closure Spillway is constructed in Year 12 and activated after the pit lake reaches its design elevation." Clarify how construction of the TSF Closure Spillway in Year 12 is achieved in conjunction with the proposed schedule for raising of the embankment for TSF C?	The water balance and water quality models conceptually incorporate a closure spillway channel being implemented in approximately Year 12 as a water quality mitigation consistent with the concept presented and approved during the Environmental Assessment. The spillway outlet from the TSF will not be constructed until closure of the facility due to ongoing raising of the embankment for TSF C.		EMLI (S. Morse, A.McPherson)	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
313	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 5.6.2 of Appendix 3-J states, "The tailings distribution system corridor will initially follow the existing exploration access road until the low point near the current crossing of Davidson Creek…The supernatant pond will form near the interface of the two disposal areas to allow for efficient saturation of the waste rock interstitial space within 1 year of placement to meet geochemical objectives." The Davidson Creek Berm appears to be located between the pond and waste rock areas. How does the	Initially, PAG waste rock placement will begin between the Diversion Berm and Main Dam C during pre-production. Water will be allowed to accumulate between the Diversion Berm and Main Dam C once PAG placement begins to saturate the voids in a manner consistent with the geochemical objectives for this waste material. Initially, the water stored upstream of the Diversion Berm and the water within the PAG waste rock voids will be separated by the Diversion Berm and will not interact. PAG waste rock placement will continue		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
314	Appendix 3-J	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	What is the impact of degradation of the TSF C upstream geomembrane post-closure?	Please see attachment "R1_EMLI Geotech Comment IDs 303 304 314 318.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jim/Dan	AT/KP	Ready for Submission	AT, June 21	Ready for Publishing
315	Appendix 3-K	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 5.3.3 of Appendix 3-K states, "The uncertainty related to the behavior of the completely weathered bedrock and glaciolacustrine units present in the foundation can be effectively mitigated by progressively placing addition waste rock (e.g. buttresses) downstream of Main Dam C. This mitigation measure is incorporated into the TSF design with PAG/NAG-ML waste rock placement within TSF D beginning in approximately Year 6. Buttress development may also be advanced earlier (e.g. during Stages 3 and 6), if required, in critical areas within the downstream step-outs required for later stages of Main Dam C using NAG waste rock." How will the requirement for implementation of a buttress be identified?	Please see attachment "R1_EMLI Geotech Comment IDs 291 292 296 307 315 317.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 16	Ready for Publishing
316	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Provide a TSF D waste rock deposition plan that details how waste rock will be placed in the TSF to saturate within one year, including mitigation measures for possible upset conditions, summary of Safe Operating Procedures (SOPs) for access, etc...	Please see attachment "R1_EMLI Geotech-Geoscience Comment IDs 308 316 389.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jim/Dan	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
316	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	QP Response Required	No	The proponent response states, "The technical specifications associated with Zone C material placement will apply to the material placed within the Main Dam C footprint." EMLI reviewers cannot locate where the 'Main Dam C footprint' is identified within TSF D PAG Waste Rock and where associated technical specifications are identified (i.e., to Drawings G0040, G0105, G0106, and G0107 in Appendix 3-K do not indicate the location and specifications). Provide drawings which indicate the location of the referenced Main Dam C footprint and associated technical specifications associated. Revisions of Drawings G0040, G0105, G0106, G0107 and others may be suitable.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Jim/Dan	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
316	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
317	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Is it possible for the TSF D pond level to rise above the TSF C pond level? If so, is the TSF C dam designed to safely allow flow from TSF D to TSF C? If not, provide justification	Please see attachment "R1_EMLI Geotech Comment IDs 291 292 296 307 315 317.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, June 16	Ready for Publishing
318	Section 2.3.3 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 2.3.3 of Appendix 3-Z states, "The embankment drainage collection systems will comprise the following: longitudinal drains within the Zone T material to collect and convey the seepage thought the dam longitudinally; foundation and chimney drains in select location downstream of the cut-off trench to collect seepage and control seepage gradients; embankment outlet drains constructed in the Davidson Creek basins to convey seepage downstream to the ECD; perimeter ditches along the downstream toe of the embankment to collect seepage and surface runoff." Details of these drainage collection systems, including the design criteria, design, analyses, and locations cannot be located within the Application and are not included in the referenced figure. Provide details of the drainage collection systems for TSF D.	Please see attachment "R1_EMLI Geotech Comment IDs 303 304 314 318.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 21	Ready for Publishing
319	Table 6.2 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Provide the analyses used to prepare Table 6.2 of Appendix 3-Z.	Please see attachment "R1_EMLI Geotech Comment IDs 319-321.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing
320	Table 6.2 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Table 6.2 of Appendix 3-Z presents the results of sensitivity analyses which do not meet the minimum target FOS of 1.2 with many analyses results indicating a FOS<1. Provide a discussion of these results and present a summary of additional investigation, mitigation measures, monitoring, etc... including timelines for investigation and implementation.	Please see attachment "R1_EMLI Geotech Comment IDs 319-321.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing
320	Table 6.2 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	QP Response Required	Yes	a) EMLI reviewers note that the results presented for the Main Dam D post-seismic stability analysis in Appendix 3-Z (Table 6.1 and Figure C4.8) and the sensitivity analysis (ID # 320 response Table 3.1 and Figure A.3) present different results for what appears to be the same analysis (configuration and input parameters, different method of slip surface determination). The differing results are such that the post-seismic stability analysis presented meets the required minimum FoS of 1.2 while the sensitivity analysis presented does not (FoS = 1.0). What is the difference between the two analyses and why do the results presented differ?	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
320	Table 6.2 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	Potential Permit Condition	Yes	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
321	Figures C4.1 and C4.2 in Appendix C4 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	Yes	TSF D stability analyses presented in Figures C4.1 and C4.2 in Appendix C4 of Appendix 3-Z appear to be under normal pond volumes. Provide the analyses under design flood conditions.	Please see attachment "R1_EMLI Geotech Comment IDs 319-321.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing

322	Appendix 3-X3	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	Yes	Appendix 3-X3 provides descriptions of anticipated runout zones for multiple stockpiles, with extents shown on Figure 1. Provide the supporting design basis, input parameters (including justification) and analyses used to identify the potential runout zones. Note that the assessment is expected to include both runout and rock fall (where applicable).	Please see attachment "R1_EMLI Geotech Comment IDs 322 336.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph/Dan	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
322	Appendix 3-X3	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	QP Response Required	Yes	The response provided indicates that, "The basis of the stockpile run-out assessment presented in Appendix 3-X3 of the Application is described therein." The reviewer is unable to locate the basis of the runout assessments. Provide the requested information or identify specifically where the requested information can be found within the referenced report for each structure.	Please see attachment "R2_EMLI Geotech Comment IDs 322 336.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 16	Ready for Publishing
322	Appendix 3-X3	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	Potential Permit Condition	Yes	The response provided includes recommendations for additional runout assessments to be carried out. If permitted, a requirement for these assessments to be carried out and submitted to the Chief Permitting Officer is anticipated be included as a Permit Condition. [Potential Permit Condition]	BW Gold acknowledges the potential permit condition.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
323	Section 3.5.3.10	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.5.3.10 of the Application states, "The LGO Stockpile will be built by bottom-up construction with six 20 m lifts." Appendix 3-C, Section 6.1 provides a design input of "5 x 20 m lift heights." Appendix 3-N, Section 3.1 states "The LGO stockpile was designed with up to five 20 m high lifts…" Please clarify the number of lifts proposed for the LGO stockpile.	The maximum height of the LGO Stockpile is approximately 100 m and comprises 5 x 20 m lifts as shown on Figures 6.1 to 6.4 in Appendix 3-C. The sub-grade elevation at the downstream toe of the pile varies along the length of the stockpile and therefore the dump crest elevation also varies to maintain the maximum stockpile height of approximately 100 m.		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
324	Section 3.5.5.9	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.5.5.9 of the Application states, "The design capacity is 111.1 Mt with a 51.4 million loose cubic metres." Appendix 3-C, Table 6-2, and Appendix 3-N, Section 3.1 provide a design capacity of 113.1 Mt for the LGO Stockpile. What is the design capacity for the LGO Stockpile?	The design capacity of the LGO Stockpile is 113.1 Mt. Section 3.5.5.9 of the Application should state "The design capacity is 113.1 Mt or 51.4 million loose cubic metres."		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
325	Section 3.3.2	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.3.2 of Appendix 3-N states, "A historical sub-glacial meltwater corridor was identified at the northern end of the footprint where it is inferred that a northeast-east trending channelized glaciofluvial unit comprising undifferentiated sands and gravels may be present." Is there any potential for this glaciofluvial unit to interact with the LGO Stockpile below-liner seepage collection system?	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
326	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Figure C1.2 in Appendix C1 of Appendix 3-N shows Artesian Exploration Drillholes encountered immediately to the east of the LGO Stockpile. How have these conditions been considered in the design and analysis of the LGO Stockpile?	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
327	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Is there any potential for artesian conditions encountered immediately to the east of the LGO Stockpile to impact the LGO Stockpile or the below-liner seepage collection system?	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
328	Table 4.3 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Table 4.3 of Appendix 3-N, Estimated Material Parameters, does not include parameters for the LGO stockpile low permeability liner. Demonstrate how the liner was incorporated into the stability analysis.	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
329	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 4.2.2 of Appendix 3-N states, "Sensitivity analyses were conducted for the LGO Stockpile (Section 1 and 2)…Results of the sensitivity analyses are discussed in Section 4.3." The reviewer was not able to find the discussion of the sensitivity analyses carried out for the LGO Stockpile in Section 4.3. Provide a description and results of the sensitivity analyses carried out for the LGO Stockpile.	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
330	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Appendix C1 of Appendix 3-N provides Geotechnical Conditions Plan and Sections for the LGO Stockpile (Figures C1.1 through C1.2). Appendix C2 provides stability analysis figures including ultimate configurations (Figure C2.3 through C2.8). The ultimate LGO Stockpile heights in the geotechnical conditions sections do not match the ultimate LGO Stockpile heights in the stability analysis sections. Provide clarification on the locations of the stability analysis sections for the LGO Stockpile.	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
331	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.1 of Appendix 3-N states, "The proposed ultimate stockpile crest is at an elevation of 1,540 masl, and the maximum height of the stockpile along the critical cross section is approximately 140 m." The reviewer was unable to find stability analysis figures representing an analysis of a section for the LGO Stockpile 140 m in height, or with the crest at an elevation of 1540 masl in the Application. Advise how the ultimate configurations for analysis were determined. Provide rationale if a section of the LGO	Please see attachment "R1_EMLI Geotech Comment IDs 325-331.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
332	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 5.6.2 of Appendix 3-N states, "The LGO Collection Pond was designed to contain continuous seepage and runoff from events up to the 1 in 200-year, 24-hour storm assuming it is maintained dewatered to the maximum practicable extent." What is the maximum water level within the LGO Collection Pond that will allow it to contain the 1 in 200-year, 24-hour storm event?	The maximum water level for providing enough storage for the design event is 1405.5 masl (0.5 m above the base to account for dead storage). The peak elevation after the design event occurs is approximately 1410 masl.		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
333	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 3.0 in Appendix A of Appendix 3-N, under Seepage Management System states, "Objective: Limit seepage to groundwater to the extent reasonably practicable using above liner and below liner seepage collection drains and a low-permeability liner system." The reviewer was unable to find further details regarding the above-liner seepage collection drains. Provide design details for the above-liner seepage collection drains.	The statement in Section 3.0 of Appendix A of Appendix 3-N that stockpile drainage will be "collected with above liner collection drains and conveyed to the Low Grade Ore Stockpile Collection Pond" is incorrect and should read "collected above the liner and conveyed to the Low Grade Ore Stockpile Collection Pond" for consistency with the design details provided in Section 5 and shown on the associated design drawings in Appendix 3-N. The LGO material is expected to be coarse-grained and will convey flow above the liner to the collection channels.		EMLI (S. Morse, A.McPherson)	KP		Michael/Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
334	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section C3.4.6 in Appendix C3 of Appendix 3-N states, "Sensitivity analyses were also carried out while considering a range in the effective strength of the foundation materials of ±5", and the results are included on the associated figures in the attachments." The reviewer was unable to find the referenced sensitivity analysis results on the associated figures. Clarify how/where the sensitivity analysis results are presented in the Appendix C3 figures.	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
335	Section 3.3.4 in Appendix D of Appendix 3-Y	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.3.4 in Appendix D of Appendix 3-Y states, "Seepage from the stockpile footprint contributes to the collection pond (via springs in the stockpile footprint), the LGO water collection system (via springs in the LGO footprint)…" How have the springs referenced been incorporated into the analysis and design of the LGO Stockpile?	The potential for groundwater springs was considered and accommodated in the design. Groundwater (springs) discharging to the foundation drains will be collected and conveyed to the LGO Collection Pond, as discussed in Section 5.1 of Appendix 3-N.		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
336	Section 3.11 of Appendix 3-X3	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	Yes	Section 3.11 of Appendix 3-X3 provides a description of the anticipated runout zone for the LGO Stockpile, with extents shown on Figure 1. What would be the runout extent if there was a slope failure of the LGO Stockpile towards the Open Pit?	Please see attachment "R1_EMLI Geotech Comment IDs 322 336.pdf".		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph/Dan	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing

336	Section 3.11 of Appendix 3-X3	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	Yes	The proponent response provided states, “Sometime during Year 8, the elevation of a portion of the LGO Stockpile is scheduled to rise above the lowest pit elevation (northwest wall). It is possible that the run-out hazard zone at that time would include the start of the ex-pit haul road from the pit rim and the haul ramp to the LGO Stockpile.” Part 6.10.1(7) of the Code states "The mine manager shall require a qualified person to…prepare a procedure for controlling access to areas within the potential run-out zone of all dumps; this procedure will prohibit extended activities below active dumps…" Provide the runout and rockfall zone for the LGO stockpile at the maximum stockpile elevation and demonstrate how the Code requirement will be satisfied.	Please see attachment "R2_EMLI Geotech Comment IDs 322 336.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan/Greg	AT/KP	Ready for Submission	AT, Aug 16	Ready for Publishing
336	Section 3.11 of Appendix 3-X3	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	Potential Permit Condition	Yes	The response provided includes recommendations for additional runout assessments to be carried out. If permitted, a requirement for these assessments to be carried out and submitted to the Chief Permitting Officer is anticipated be included as a Permit Condition. [Potential Permit Condition]	BW Gold acknowledges the potential permit condition.		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
337	Table 3.5.4-4	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	Potential Permit Condition	Yes	a) If permitted, a Safe Work Procedure (SWP) or Safe Operating Procedure (SOP) for construction including trafficability is anticipated to be included as permit conditions.	BW Gold acknowledges the potential permit condition.		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
337	Table 3.5.4-4	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	Yes	Table 3.5.4-4 in the Application indicates the LWS has a maximum capacity of 28.7 Mt of overburden and 0.5 Mt of NAG waste, and the UWS has a maximum capacity of 9.8 Mt of overburden and 20.9 Mt of NAG waste. a)Describe how this material will be placed in the stockpiles (i.e., mixed or segregated?, continuous	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
338	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	b)Provide justification for assuming the stockpiles remain unsaturated in consideration of the comment above.	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
338	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	QP Response Required	No	b) Please describe how the stockpile drainage will be confirmed, and identify the impacts and contingency measures/plans if the stockpiles do not drain as assumed. The response should address consideration of, but not limited to, monitoring requirements, sensitivity of dump stability to saturated conditions, material placement in adverse conditions (rain and winter), static and seismic liquefaction potential, and others	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
338	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 338 339.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Sep 1	Ready for Publishing
339	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	c)Provide justification for the use of the Lower bound Leps (1970) rockfill shear strength function in the stability models for the LWS and UWS, specifically in consideration of the amount of overburden placed in the LWS (nearly 100% overburden) and UWS (~1/3 overburden).	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
339	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	QP Response Required	No	c) provide justification for the use of “revised strength parameters for the LWS…based on the ablation till material, which has the lowest interpreted friction strength deposits at the site.” in consideration of the dump material placement methodology described (maximum 20 m lifts, lift surface nominally compacted by haul truck traffic). It is EMLI’s understanding that the strength parameter selected (effective friction angle of 32°) is similar to the interpreted strength of in-situ glacial till deposits at the site.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP		Joseph/Dan	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
339	-	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 338 339.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Sep 1	Ready for Publishing
340	Appendix B of Appendix 3-M	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	d)Section 4 and Table 2.1-1 of Appendix B within Appendix 3-M states, “a minimum of 10% of the waste rock would be placed with the overburden to provide plating and maintain the integrity of the stockpiles.” This is inconsistent with the volume of overburden and NAG waste rock placed in the LWS. Provide justification for the apparent inconsistency.	Please see attachment "R1_EMLI Geotech Comment ID 340.pdf"		EMLI (S. Morse, A.McPherson)	ERM	MMTS	Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
341	Section 3.5.4.11	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 3.5.4.11 in the Application states, “The Construction Phase for the waste stockpiles includes…boulder rollout catchberms”. Provide a description and design of these catchberms including, but not necessarily limited to, location, height, and cross-section, along with any analyses.	Please see attached memo "R1_EMLI Geotech Comment ID 341.pdf"		EMLI (S. Morse, A.McPherson)	MMTS		Marc S	AT	Ready for Submission	AT, June 25	Ready for Publishing
342	Appendix B of Appendix 3-M	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The description of Candidate 1: Upper and Lower Non-Acid Generating Waste Rock and Overburden Storage presented in Appendix B of Appendix 3-M, and selected as the preferred NAG waste and overburden storage option, is inconsistent with the LWS and UWS presented within the Application. Inconsistencies include, but are not limited to the following: •Section 4 of Appendix B within Appendix 3-M refers to the ‘the upper overburden stockpile to the	Please see attachment "R1_EMLI_Geotech_Comment Responses 240, 342,370.pdf"		EMLI (S. Morse, A.McPherson)	ERM	MMTS	Tonia	RT	Ready for Submission	RT; June 30	Ready for Publishing
343	Section 6.3.2 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 6.3.2 of Appendix 3-N states, “The channels were sized to convey the 1 in 10-year return, 24-hr flood with a minimum of 300 mm of freeboard and have sufficient capacity to pass the 1 in 200-year, 24-hr flood at bank full conditions.” The UWS North Collection Channel and South Diversion Channel have the same design criteria. The HSRC Guidance Document states “Applications should provide…hydraulic capacity and confirmation that all ditches/channels can safely convey the design	Please see attachment "R1_EMLI Geotech Comment IDs 343 359 367".		EMLI (S. Morse, A.McPherson)	KP		Michael/Carlos	AT/KP	Ready for Submission	AT, June 07	Ready for Publishing

344	Section 8.5 of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 8.5 of Appendix 3-Z presents the phreatic surface for several sediment control ponds under post-construction (static, short-term) and long-term condition; phreatic surface values are presented in either masl or mbgs. Provide all values in masl and mbgs/mags.	The requested information is provided below in 'masl' and 'mbgs' for the post-construction case, along with clarification related to how the phreatic surface was drawn. The maximum pond operating levels for the long-term analyses are provided in the report in 'masl' only. Operating water levels for the ponds are not provided in meters above or below ground surface because these values would be confusing due to the cut to fill nature of the pond designs. For the post-construction (static, short term) analyses, a simplified representation of the groundwater phreatic surface was drawn in consideration of the groundwater level measured from nearby hydrogeological installations. The phreatic surface was drawn as a subdued reflection of surface topography with depth below ground surface and approximate groundwater elevation at the pond centreline as follows: • 20.1 mbgs (1,379 masl) for the LWS collection pond • 1.6 mbgs (1,473 masl) for the UWS collection pond • 3.6 mbgs (1,433 masl) for the TS-2 sediment control pond • 19.2 mbgs (1,365 masl) for the TS-3 sediment control pond • 5 mbgs (1,242.5 masl) for the TS-4A sediment control pond • 23 mbgs (1,192 masl) for the TS-4B sediment control pond • 16 mbgs (1,204 masl) for the TS-5 sediment control pond		EMLI (S. Morse, A.McPherson)	KP		Jordan P/Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
345	Table 3.5.4-7	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Table 3.5.4-7 in the Application, under the heading Structure, Lower Waste Stockpile Collection Pond, there is a superscript 4 indicating a reference note. The reviewer was unable to find the reference note. Provide the text associated with reference note 4	The reference to Note 4 should have been to Note 3 referring to a minimum of 500 mm of freeboard.		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
346	Figure 3.5-45	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Comment	No	Figure 3.5-45 LWS material labelled as ore.	Thank you for pointing out the discrepancy. It should have been labelled as "Stockpile Material (Waste)". Please note that Figure 4.2 in Appendix 3-N is similarly mislabeled.		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
347	Section 4.2.2 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 4.2.2 of Appendix 3-N states, “Sensitivity analyses were conducted for …and Lower Waste Stockpile (Section 4)…Results of the sensitivity analyses are discussed in Section 4.3.” The reviewer was not able to find the discussion of the sensitivity analyses carried out for the LWS in Section 4.3. Provide a description and results of the sensitivity analyses carried out for the LWS.	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
348	Table 6.1 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Table 6.1 of Appendix 3-N states that the design flow for the LWS South Collection Channel is 3.56 m^3/s. Appendix 3-N, Appendix D, Drawing C3716, includes a detail of a road crossing culvert for the LWS South Collection Channel. What is the capacity of the road crossing culvert?	The culvert was designed to pass the 1-in-10-year 24-hour storm event flow of 1.73 m3/s.		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
348	Table 6.1 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The HSRC Guidance Document states “Applications should provide…hydraulic capacity and confirmation that all ditches/channels can safely convey the design flood in accordance with CDA guidelines (minimum 1:200 years) without overtopping, side slope failure or significant erosion.” What impact would a 1 in 200-year flood event have on the road crossing culvert? Would there be a loss of containment of the LWS South Collection Channel? If so what are the impacts?	The 1 in 200-year flood event would be expected to backwater the culvert designed for the 1 in 10-year flood event and could result in a loss of containment of the LWS South Collection Channel. Any lost flow would be captured downstream in the Water Management Pond. The LWS South Collection Channel culvert design criteria will be reviewed for the Issued for Construction (IFC)		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
348	Table 6.1 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	Information Requirement	No	When will the design criteria be reviewed? When will IFCs be produced? What is the impact to the Water Management Pond when the there is overflow from the LWS? {Information Requirement]	The Issued for Construction (IFC) design drawings for the Lower Waste Stockpile (LWS) water management structures will be developed and submitted to the EMLI Chief Inspector prior to construction of these structures as required by Part 10.5.1 of the Health, Safety and Reclamation Code for Mines in British Columbia. A hard target date for IFC drawing submission cannot be provided at this time due to the dynamic nature of the permitting, IFC design, and project development schedule. The design criteria have been		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	KP, Sep 7	Ready for Publishing
349	Section 6.5.1 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 6.5.1 of Appendix 3-N states, “The collection pond has the ability to contain and convey the 1 in 10-year, 24-hr flood through the primary outlet to the Metals WTP Pond.” What is the maximum allowable pond level for the LWS Collection Pond to be capable of containing and conveying the 1 in 10-year 24 hr. flood?	The maximum pond level for providing enough storage for the design event is 1400.25 masl (0.5 m above the base to account for dead storage). The peak elevation after a 1:10 year 24-hour storm is 1405.5 masl.		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
350		Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Provide a plan showing the location of the Metals WTP Pond and a design for the Metals WTP Pond.	Please see memo "R1_EMLI_Geotechnical_Comment ID 350.pdf"		EMLI (S. Morse, A.McPherson)	BWG		Georges	TD	Ready for Submission	GM; June 24	Ready for Publishing

350		Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The drawings provided do not show any details for the WTP Pond. Provide design details for the pond including, but not limited to, a cross-section through the pond, the pond capacity, if any dams are required to contain the pond.	The Metals WTP Pond will be constructed in two stages to support the water treatment system ramp up with an initial storage volume of approximately 4,600 m3 provided at the start of operations. The pond capacity will be expanded up to approximately 9,000 m3 in Year 4 by constructing an adjacent, connected pond of similar size. Both ponds will be rectangular in shape with approximate base dimensions of 40 m by 22 m, approximately 4 m deep with 3H:1V side slopes within the pond. The ponds will be lined with high-density polyethelene (HDPE) or an equivalent containment liner approved by the engineer. The ponds will be excavated and contained entirely below ground surface with no dams required to contain the ponds. A small perimeter berm at the top of the cut-slope will prevent surface runoff from contributing to the ponds. BW Gold will provide a letter with additional design details, including the technical design basis, design drawings with a plan view and cross sections, and relevant analyses in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI (S. Morse, A.McPherson)	KP	BWG	Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
350		Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	3	Follow Up	Information Requirement	No	Partial response provided, awaiting additional information as indicated in the response. [On Hold]	Please see memo "R2_EMLI_Geotechnical_Comment ID 350.pdf"		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, Aug 31	Ready for Publishing
351		Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Provide a list of all water sources that will be reporting to the Metals WTP Pond during the 1 in 10-year 24-hour flood?	Water will be conveyed to the Metals WTP from the following sources: 1) Lower Waste Stockpile Collection Pond 2) Open Pit dewatering system, including the pit sump and groundwater dewatering wells 3) Upper Waste Stockpile Collection Pond (beginning in approximately Year +11)		EMLI (S. Morse, A.McPherson)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
351		Geotechnical	EMLI (S. Morse, A.McPherson)		10-Aug-22	2	Follow Up	Information Requirement	No	Demonstrate that the Metals WTP Pond has the capacity required to accommodate the anticipated flows during flood events.	The Metals WTP Pond will function as an influent equalization pond with a storage volume of approximately 4,600 m3 until Year 4 and up to approximately 9,000 m3 thereafter. This pond is designed to accommodate steady inflows from the various pumping systems from the Lower Waste Stockpile Collection Pond, Open Pit dewatering system, including the pit sump and groundwater dewatering wells, and the Upper Waste Stockpile Collection Pond (beginning in approximately Year +11). The Lower Waste Stockpile Collection Pond (LWS CP), Upper Waste Stockpile Collection Pond (UWS CP), and pit sump will provide temporary storage water generated by flood events until the flows can be transferred to the Metals WTP Pond and treated at the Metals WTP. The flood storage capacity of the LWS CP is approximately 50,000 m3 as described in Sections 6.5 of Appendix 3-N of the Application and the capacity of the UWC CP is approximately 100,000 m3 as described in Section 6.4 of Appendix 3-Y of the Application. The temporary storage capacity in the pit sump will be dependent on the mining phase, but is expected to be substantial and is not considered to be a design constraint that would affect the design basis capacity of the Metals WTP Pond.		EMLI (S. Morse, A.McPherson)	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
352	Section 6.5.2 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 6.5.2 of Appendix 3-N states, “The spillway outlet was designed to convey spillway flow beyond the toe of the pond. An option to excavate and line the full 100 m length to Mine Area Creek will be determined in the field…” What are the anticipated impacts of not excavating and lining a channel from the spillway outlet to the Mine Area Creek? Provide a rationale of why this activity may not be required.	Please see attachment "R1_EMLI Geotech Comment IDs 352 353 357.pdf".		EMLI (S. Morse, A.McPherson)	KP		Dan	AT/KP	Ready for Submission	AT, June 16	Ready for Publishing
353	Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Appendix 3-N indicates that in case of the 1 in 200-year, 24-hour flood, both the LGO Collection Pond and the Lower Waste Stockpile Collection Pond spillways would direct flows to the Mine Area Creek. What will the impact of these additional flows be on the stability of creek materials?	Please see attachment "R1_EMLI Geotech Comment IDs 352 353 357.pdf".		EMLI (S. Morse, A.McPherson)	KP		Michael/Carlos	AT/KP	Ready for Submission	AT, June 16	Ready for Publishing
354	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Appendix 3-Z states, "For the long-term static and seismic analyses a simplified representation of the phreatic surface is drawn to follow the natural ground surface." Figures E1.1 and E1.4, stability analysis results for the LWS Collection Pond long-term conditions, do not appear to include a phreatic surface outside of the pond area. Provide details regarding the modeled phreatic surface for long-term static and seismic analyses for the LWS Collection Pond	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
355	Section 2.6 of Appendix 3-Y	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Section 2.6 of Appendix 3-Y states, “Terrain Stability Assessments (TSAs) should be undertaken in mapped areas of ‘potentially unstable’ and ‘unstable’ terrain during construction as recommended in the geohazard assessment (KP, 2022c). TSAs should adopt a risk-based approach to determine the extent of any necessary temporary mitigation measures…” What types of “temporary mitigation measures” are anticipated?	The types of temporary mitigation measures could include additional control of surface and subsurface water, adjustment to construction methods and activity sequencing, adjustment to cut and fill design slope angles, and temporary support/stabilization (e.g. buttressing, soil nailing, rock bolting, etc...).		EMLI (S. Morse, A.McPherson)	KP		Dan/James	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
356	Section 4.2 of Appendix 3-Y	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 4.2 of Appendix 3-Y indicates that the sensitivity analyses were completed by varying the effective strength of the lodgement till foundation by +/-5 degrees. What is the basis for the selection of +/-5 degrees being used?	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
357	n 6.0 of Appen	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 6.0 of Appendix 3-Y states that the UWS South Diversion Channel discharges to ‘natural ground downstream of the collection pond where is will flow following exiting drainages to the WMP.’ and that “The emergency spillway from the collection pond would release flows to a drainage that ultimately flows to the WMP as well.” Reviewers note that the UWS South Diversion Channel is predicted to discharge flows of 5.0 m3/s or 2.5 m/s to natural ground during the 1 in 10 year 24 hour storm event	Please see attachment "R1_EMLI Geotech Comment IDs 352 353 357.pdf".		EMLI (S. Morse, A.McPherson)	KP		Carlos	AT/KP	Ready for Submission	AT, June 16	Ready for Publishing

358	Section 6.4 of Appendix 3-Y	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Section 6.4 of Appendix 3-Y states, “the pond is assumed to have a starting water level of 0.5 m when the 1 in 10-year and 1 in 200-year, 24-hour precipitation event occurs.” and “The spillway from the collection pond can also provide controlled discharge of flows into a natural drainage that flows to the WMP if water quality is suitable for direct release.” Describe how the spillway will provide controlled discharge of flows suitable for direct release, while maintaining a water elevation of 0.5 m to accommodate the design storm event for storage (1 in 10-year, 24-hour precipitation).	A starting water level in the UWS Collection Pond of 0.5 m was selected to account for some dead storage prior to the occurrence of any design storm event. The spillway will provide controlled discharge for a 1 in 200-year, 24-hour design storm event, maintaining a maximum flow level 0.5 m below the pond crest (freeboard). The UWS Collection Pond will utilize a pumping system to convey the recovered flows to the Metal WTP influent pond. The pond will be maintained in a dewatered condition to the maximum practical extent to limit the potential for discharge of untreated water to the WMP during severe storms. No change in the stability of the creek material is expected as all the water discharging from the proposed channels and ponds will be controlled by erosion control outlets.		EMLI (S. Morse, A.McPherson)	KP		Carlos	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
359	Tables 8.2 and 8.3	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Tables 8.2 and 8.3 present the ‘key design parameters’ for the North Collection Channel and South Diversion Channel, respectively, based on the 1 in 10-year, 24-hour design storm event. Provide the ‘key design parameters’ for the 1 in 200-year, 24-hour design storm event.	Please see attachment "R1_EMLI Geotech Comment IDs 343 359 367".		EMLI (S. Morse, A.McPherson)	KP		Carlos	AT/KP	Ready for Submission	AT, June 07	Ready for Publishing
360	Figure C.4 in Appendix C of Appendix 3-Y	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Figure C.4 in Appendix C of Appendix 3-Y does not meet the minimum FOS requirement of 1.4 as indicated in Table 4.4. EMLI expects the design meet the target minimum FOS or provide justification if meeting the target FOS is not required.	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
361	Appendix 3-D of Appendix 3-Y	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	Appendix 3-D of Appendix 3-Y indicates that springs are located in the UWS footprint. Identify the location of the springs, and how the springs were considered in the stability analyses.	The water balance info in Section 3.3.4 of Appendix D notes that seepage from the stockpile footprint contributes to the collection pond (via springs in the stockpile footprint). This is considered in the stability modelling by the groundwater surface at the natural ground surface in the base of the stockpile. The "springs" are based on the results of the numerical groundwater modelling presented in Appendix 5-F of the Application and refer to groundwater that is simulated to discharge along the drainages beneath the proposed stockpile footprints. Individual springs have not been identified in the field; groundwater discharge to surface is expected to be along the natural drainages.		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
362	Figures E2.2 and E2.3 of Appendix E in Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	The UWS Control Pond stability analyses shown on Figures E2.2 and E2.3 of Appendix E in Appendix 3-Z do not appear to include loading from the UWS. Provide justification for not including the loading from the UWS.	The analyses were for the post construction condition prior to placement of waste material into the stockpile as noted on the referenced figures. Additional analyses were provided in the report that include loading from the stockpile (see results for the Long Term case). The analyses were also updated in response to EMLI comment IDs 363 and 364. See attachment "R1_EMLI Geotech Comment IDs 363 364" for additional stability analyses.		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
363	Appendix E of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The UWS Control Pond stability analyses provide in Appendix E of Appendix 3-Z includes phreatic surface assumption which are inconsistent with those used for the UWS stability analyses (Appendix 3-Y) and the field results which indicate that phreatic surface is 1.6 mbgs. Provide justification for the phreatic surface applied in the UWS Control Pond stability analyses including discussion of the likelihood and impact of seepage from the excavated UWS Control Pond face behind the liner.	Please see attachment "R1_EMLI Geotech Comment IDs 363 364"		EMLI (S. Morse, A.McPherson)	KP		Joseph/Carlos	AT/KP	Ready for Submission	AT, June 20	Ready for Publishing
364	Appendix E of Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The UWS Control Pond stability analyses provided in Appendix E of Appendix 3-Z do not include stability analyses of the downstream dam face (downstream in-situ pillar face). Provide stability analyses for the downstream dam face (downstream in-situ pillar face).	Please see attachment "R1_EMLI Geotech Comment IDs 363 364".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 20	Ready for Publishing
365	Section 3.6.3 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.6.3 of Appendix 3-N states that “The worst case values from all the stockpiles for each factor were used to determine a conservative rating for all the topsoil stockpiles for the purpose of selecting a hazard classification.” Table 3.4 provides the 1991 DSR Scheme for determining the Dump Stability Class.	Please see attachment "R1_EMLI Geotech Comment IDs 365 366".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
366		Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	The ‘Dump Material Quality’ description for the topsoil stockpiles is ‘Moderately strong, variable durability’. Provide justification for this selection based on the guidance in the Interim Guidelines of the British Columbia Mine Waste Rock Pile Research Committee.	Please see attachment "R1_EMLI Geotech Comment IDs 365 366".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
367	Section 7.3.2 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 7.3.2 of Appendix 3-N states, “The channels were sized to convey the 1 in 10-year return, 24-hr flood with a minimum of 300 mm of freeboard and have sufficient capacity to pass the 1 in 200-year, 24-hr flood at bank full conditions.” The HSRC Guidance Document states “Applications should provide…hydraulic capacity and confirmation that all ditches/channels can safely convey the design flood in accordance with CDA guidelines (minimum 1:200 years) without overtopping, side slope failure	Please see attachment "R1_EMLI Geotech Comment IDs 343 359 367".		EMLI (S. Morse, A.McPherson)	KP		Michael/Carlos	AT/KP	Ready for Submission	AT, June 07	Ready for Publishing
368	Table 7.2 of Appendix 3-N	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Clarification	No	Table 7.2 of Appendix 3-N includes a note that the ‘Total Depth’ “Includes erosion protection thickness.” Do the depths noted in Tables 7.3 through 7.15 include erosion protection thickness?	Yes, all the depths noted in Tables 7.3 through 7.15 include erosion protection thickness.		EMLI (S. Morse, A.McPherson)	KP		Michael	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
369	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	QP Response Required	No	Section 8.5 of Appendix 3-Z states, "For the long-term static and seismic analyses a simplified representation of the phreatic surface is drawn to follow the natural ground surface" and "A manual phreatic surface is modelled for the long-term analyses for the maximum pond operating water level for each stockpile of…" Provide details regarding how the phreatic surface transition from the maximum pond operating level to the natural ground surface was established for the Topsoil Stockpile Sediment Control Ponds for stability analyses.	Please see attachment "R1_EMLI Geotech Comment IDs 334 337-339 347 354 356 360 369.pdf".		EMLI (S. Morse, A.McPherson)	KP		Joseph	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
370	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	The Application references a number of borrow areas including, but not necessarily limited to, the mine access borrow area, construction borrow pit, downstream aggregate borrow area, the borrow, aggregate screening and concrete batch plant area, and the borrow, aggregate screening and construction laydown area. Provide a plan with all the borrow areas within the proposed PMA, including the three identified at the Open Pit, and a summary table of each borrow (material, excavation method, depth, volume, etc…).	Please see attachment "R1_EMLI_Geotech_Comment Responses 240, 342,370.pdf"		EMLI (S. Morse, A.McPherson)	ERM	BWG/KP	Tonia	RT	Ready for Submission		Ready for Publishing
370	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 10, 2022	2	Follow Up	Information Requirement	No	Response incomplete. EMLI reviewers cannot locate a plan with all borrow areas within the proposed PMA and the summary table does not include information for all borrow areas proposed. One of the areas of confusion is the apparent multiple naming conventions for the same borrow areas. Comment repeated: “Provide a plan with all the borrow areas within the proposed PMA, including the three identified at the Open Pit, and a summary table of each borrow (material, excavation method, depth, volume, etc..).”	Please see attachment "R2_EMLI Geotech Comment ID 370.pdf".		EMLI (S. Morse, A.McPherson)	ERM	BWG/KP	Tonia		Ready for Submission		Ready for Publishing
371	Appendix 3-Z	Geotechnical	EMLI (S. Morse, A.McPherson)		Jun 01, 2022	1	New	Information Requirement	No	The Application includes reference to the Downstream Aggregate Borrow Area Sediment Control Pond, the location and design for which cannot be found within the Application. Provide the location and design for the Downstream Aggregate Borrow Area Sediment Control Pond, and confirm that all other ponds and dams are included in the Application including, but not necessarily limited to, ponds and dams associated with the borrow areas identified in the comment above	Please see attachment "R1_EMLI Geotech Comment ID 371.pdf".		EMLI (S. Morse, A.McPherson)	KP		Michael, Dan, Cindy	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing

372	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	The geochemical characterization information provided in the Application relies on several supporting documents, including the report entitled "Blackwater Gold Project: 2013 Geochemical Characterization Report", prepared by AMEC Environment and Infrastructure, and two technical memoranda prepared by Emily Sportsman, Amec Foster Wheeler, dated May 2016. As these documents were prepared by a consultant not listed in Table 1.3-5, and are not signed or sealed, please indicate the responsible and accountable QP, where these documents have been relied on for the Application	These documents were submitted as part of the EA and provide the baseline geochemical characterization for the Project. This information has been summarized in Section 2.4.1 of the Application (Geochemical Characterization) and has been relied upon in good faith. Information in these reports has also been relied on to support the development of the ML/ARD Management Plan (Appendix 9-D) and the Geochemistry Source Term Report (Appendix A.6 to Appendix 5-D). These two documents (Appendix 9-D and Appendix A.6 of Appendix 5-D) were prepared and sealed by Lorax Environmental Services.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
373	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Terms for NP appear to be used inconsistently throughout Section 2.4 of the Application. NP is noted to have been determined by four methods including “Carbonate NP as determined by total inorganic carbon content (CNP)”, and “Carbonate NP as determined by the solid phase calcium concentration after aqua regia digestion (Ca NP)”. Subsequently, instead of using these defined acronyms, the term “Carbonate NP” is used without specifying between CNP and CaNP. Please clarify the following: a.Which form of Carbonate NP is plotted in Figure 2.4-6?	Figure 2.4-6 shows the CNP (Carbonate NP, as determined by total inorganic carbon content).		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 21	Ready for Publishing
374	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	b.Which form of NP was used to calculate the NPR presented in Figure 2.4-7	Figure 2.4-7 presents NPR values calculated using the modified sobek NP.		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 20	Ready for Publishing
375	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Provide a figure comparing ICP CaNP and modified Sobek NP results for all waste rock units and overburden, or indicate where this figure can be located in the Application.	Please see attachment "R1_EMLI Geoscience Comment ID 375".		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 22	Ready for Publishing
375	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	Clarification	No	The correlation used to derive NP from assayed ICP-Ca was developed in 2016, as described in the AMEC 2016 memorandum. Was this correlation re-evaluated to incorporate ABA data collected subsequent to 2016	No, the relationship has not been re-evaluated. Limited ABA data on drill core has been collected since the original geochemical characterization program.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
376	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Approximately 83 Mt of overburden are anticipated to be excavated and stockpiled at site, a comparable quantity to the NAG4 and NAG5 waste rock tonnages. In particular, the Lower Waste Stockpile will consist almost entirely of overburden. However, minimal detailed characterization of overburden has been conducted and management details are lacking compared to other waste rock units. Table 3.5.4-1 in the Application appears to indicate that overburden will be operationally classified as NAG5. Meanwhile, the ML/ARD Management Plan (Appendix 9-D) states that overburden is expected to be NAG with low ML potential, and will be managed as waste rock, with only a minor volume of overburden requiring active management. The geochemical characterization of overburden presented in the Application indicates that overburden chemistry varies substantially. In particular, overburden samples were encountered in the Open Pit area and at depth with zinc concentrations in excess of 1,000 ppm, and PAG overburden samples were also encountered. 2021 SFE analyses of overburden samples, using high efficiency filters, also indicated concentrations greater than short-term water quality guidelines of parameters including arsenic, cadmium, copper, and zinc. Please provide the following details regarding overburden characterization and management: a.What are the relative tonnages or volumes of the different overburden material types (e.g., glacial till vs. weathered bedrock) expected to be excavated during construction and operations? b.How have different overburden types been considered in waste management planning? c.What contingencies have been developed to manage PAG or ML overburden that may be encountered?	Please see attachment "R1_EMLI Geoscience Comment ID 376.pdf"		EMLI (G.Wolff)	MMTS		(c) or MMTS	Marc S	GM	Ready for Submission	GM; June 21	Ready for Publishing
376	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	Clarification	No	The memo from MMTS indicates that all overburden excavated and stockpiled at site was considered to be glacial till, and that weathered bedrock was incorporated into the bedrock material balance for ore and waste. Meanwhile, geochemical characterization of overburden provided in Chapter 2 of the	Yes, confirmed that some geochemical data presented for overburden, specifically the "weathered bedrock", is planned to be managed as waste rock		EMLI (G.Wolff)	MMTS		Marc S		Ready for Submission	TD; Aug 16	Ready for Publishing
377	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	LGO will be stockpiled subaerially for several years, with the bulk of this material being processed during the final years of mining. Over this period of time, oxidation and weathering of the LGO material will be occurring. How has the impact of long-term oxidation of the material on mill processes been considered in mine planning? In the event of an extended Care and Maintenance period, please demonstrate if there is a temporal limit to the economic value of the LGO due to ongoing oxidation of	Please see response provided in attachment "R1_EMLI_Geoscience Comment ID 377.pdf".		EMLI (G.Wolff)	BWG	BWG	Alastair	TD	Ready for Submission	RT; June 22	Ready for Publishing

378	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Plans for the prevention, mitigation, and management of ML/ARD are required to be prepared in consideration of the Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia, as per Section 10.1.16 of the Health, Safety and Reclamation Code for Mines in British Columbia (the Code). Please demonstrate how the design and proposed size and duration of the LGO stockpile considers the principles and hierarchy for ML/ARD mitigation, as described in the Guidelines and the Policy for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia.	Please see attachment "R1_EMLI Geoscience Comment IDs 376c, 378, 383, 385, and 386.pdf".		EMLI (G.Wolff)	Lorax	KP	Timo, Greg	GM	Ready for Submission	GM; June 21	Ready for Publishing
379	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	The LGO stockpile liner includes an HDPE geomembrane and compacted glacial till. Where will the till for this liner be sourced from?	Glacial till meeting the Zone S fill material specification for the LGO Stockpile liner will be sourced from the Open Pit or other appropriate local borrow area, similar to Zone S material for other site water management structures.		EMLI (G.Wolff)	KP		Joseph/Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
380	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Following processing of the LGO stockpile, the till liner will likely contain elevated metals from leaching of the LGO. How will this material be handled and stored upon reclamation of the stockpile liner?	Upon mine closure, the LGO liner will be tested. Should results indicate elevated metal levels above background, the liner will be removed and stored within the open pit.		EMLI (G.Wolff)	BWG		Klaus	TD	Ready for Submission	RT; June 13	Ready for Publishing
381	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Table 5.1-1 in the Application indicates that "covering waste rock with tailings to reduce hydraulic connection between waste rock and supernatant pond" is a management strategy for waste rock deposited in the TSFs. Given the relative deposition volumes and timing for waste rock and tailings in the TSFs, it is unclear how effective this strategy will be. What proportion of waste rock in each TSF is intended to be covered by tailings? Once placed, how long will this waste rock be uncovered before it is covered by tailings?	Waste rock deposited into each TSF will be covered with tailings once waste rock placement has ceased (in approximately Year +6 for TSF C and Year +18 for TSF D). It was estimated that the waste rock could be covered by tailings within approximately one year, once tailings deposition over the waste rock storage area begins. Waste rock in TSF D will be temporarily covered by water to limit potential for oxidation beginning in Year 18 prior to deposition of tailings into TSF D beginning in approximately Year 21.		EMLI (G.Wolff)	KP		Dan	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
382	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Section 9.5 of the Application lists "quarry and borrow material" among the materials to be discussed in the ML/ARD Management Plan (Appendix 9-D); however, ML/ARD operational characterization, handling, and monitoring of quarry and/or borrow areas are not mentioned in Appendix 9-D. Please indicate where this information can be located or justify its exclusion.	Borrow material will be characterized at the same frequency as overburden. This will be specified in an updated version of the ML/ARD Management and Monitoring Plan.		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 23	Ready for Publishing
383	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Appendix 9-D, Section 4.1.1 references a relationship between ICP-Ca content and NP, and states that "in the absence of direct NP measurements, this formulation of NP will be used to define the acid generating potential of geologic materials". This statement appears to imply that direct NP measurements (i.e.., modified Sobek) are preferred; however, these measurements will only be conducted on a subset of samples submitted to an external laboratory. In the event that confirmatory NP measurements are inconsistent with on-site NP calculations derived from ICP-Ca, and would result in a reclassification of material. what steps will be taken?	Please see attachment "R1_EMLI Geoscience Comment IDs 376c, 378, 383, 385, and 386.pdf".		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 21	Ready for Publishing
383	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	a) A contingency measure for misclassification of PAG material as NAG4 or NAG5 is adjusting water management and/or treatment capacities. Should this contingency measure be understood to describe a scenario where misclassified PAG material is left in the waste stockpiles and/or other NAG4/5 waste rock deposition locations? If so, what water management adjustments or changes to treatment capacities would be considered, and what changes to stockpile closure and reclamation plans would be required? [Information Requirement] b) Please clarify if the NP formulation of [NP = 9.89 * (ICP-Ca wt%) + 4.19] is the intended operational method for determination of NP. [Clarification] c) EMLI is considering a potential permit condition requiring ongoing assessment of the correlation between ICP-Ca and NP and the use of ICP-Ca and ICP-S as proxies for NP and AP. [Potential Permit Condition]	a) Yes, this is how this contingency measure should be understood. It is important to keep in mind that the referenced contingency measure is considered a "last resort", reactive management strategy and is not expected to be required since misplaced PAG and NAG3 waste rock would be delineated and relocated to prevent the localized deterioration of contact water quality. Should the latter not be feasible due to operational constraints, operational water quality monitoring along with updated source term models would inform the need for adjustments of water management or treatment. b) It was found that inconsistent NP proxy relationships were presented in the ML/ARD Management Plan and the Source Term Report. The most up-to-date relationship used in the ARD block model is presented in the Source Term Report and should be: NP = 0.396 x (wt.% Ca x 24.9) + 3.23 The ML/ARD Management Plan will be revised with this relationship for the next document update. c) This comment is acknowledged and this potential permit condition is consistent with the planned ongoing re-evaluation of the NP proxy based on operational monitoring data as outlined in the ML/ARD Management Plan.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
384	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Which NP method (e.g., ICP-Ca, modified Sobek) was used to derive the waste rock tonnages by type presented in the waste rock production schedule in Table 5.1-1 of Appendix 9-D?	The tonnages are based on the ARD block model, which incorporates both ICP-Ca and ABA results. It is important to note that although both measurement types are included in the block model, the model largely relies on the ICP-Ca measurements as they are far more abundant (approx. 285,000 samples) compared to ABA samples (n=945).		EMLI (G.Wolff)	Lorax	BWG	Timo	GM	Ready for Submission	GM; June 20	Ready for Publishing
385	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Appendix 9-D, Section 7.1.5 discusses a verification monitoring program that will be implemented for selected mine components, including sampling waste rock deposited in the stockpiles at a frequency of one sample per 200,000 t. The verification monitoring SOP in Appendix F of this document states that this monitoring program is only applicable to waste rock (bedrock) material and not overburden materials. The Lower Waste Stockpile will contain predominantly overburden, and at a rate of one sample per 200,000 t, only two samples of NAG waste rock would be collected from this stockpile over the operations period. a.Please provide a rationale for the sampling frequency of one sample per 200,000 t.	Please see attachment "R1_EMLI Geoscience Comment IDs 376c, 378, 383, 385, and 386.pdf".		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 21	Ready for Publishing
385	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up		No	The likely effectiveness of the proposed verification monitoring program is limited at the indicated sample frequency, particularly for the Lower Waste Stockpile. However, EMLI understands that the monitoring program includes pre-blasting sampling at a greater frequency, and that the monitoring frequency will be regularly reviewed. [Comment]	Thank you for the comment.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
386	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	b.Please explain why overburden was excluded from the verification program	Please see attachment "R1_EMLI Geoscience Comment IDs 376c, 378, 383, 385, and 386.pdf".		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 21	Ready for Publishing

387	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Operational sampling will include analysis of S, Ca, and Zn as proxies for AP, NP, and ML potential. One duplicate per 10 samples will be submitted to an external laboratory for QA/QC and more comprehensive analyses. a.How will the replicability of the onsite laboratory compared to the external laboratory be assessed at the start of sampling?	The replicability of onsite and external test results will be assessed through statistical analysis (i.e.., relative percent difference) of all results produced for QA/QC purposes by a QP. In addition, suitable QA/QC protocols will be incorporated by the contracted onsite laboratory internally to ensure that the required instrumentation is adequately calibrated. Such QA/QC measures would include use of standard reference materials, the analysis of internal duplicates, and additional external comparisons. An increased frequency of external QA/QC samples may be requested if warranted.		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 23	Ready for Publishing
388	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	b.The confirmatory testing includes Modified NP. Will there be any quantification of siderite or other mineral content as part of the operational testing program?	The ML/ARD monitoring program does not currently include mineralogic analysis of waste rock. Routine XRD analysis to improve quantification of carbonate mineralogy in waste rock will be included in an updated version of the ML/ARD Management Plan.		EMLI (G.Wolff)	Lorax		Timo	GM	Ready for Submission	GM; June 23	Ready for Publishing
388	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	Potential Permit Condition	Yes	As noted in Comment 410, EMLI expects that mineralogical analyses will be included in the ML/ARD monitoring program, due to the reliance on calcium as a proxy for NP and the associated assumptions regarding carbonate mineralogy. [Potential Permit Condition]	Thank you for the comment. The next update of the ML/ARD Management Plan will include routine mineralogical analysis for the purpose of ongoing NP proxy refinement.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
389	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Table 7.2-1 in Appendix 9-D lists contingency measures for failing to submerge PAG and NAG3 rock within the prescribed timeframe in the TSF, including adjusting water management to accelerate flooding in the TSF. Where would water to accelerate flooding be sourced from, and what are the implications of this contingency for wider water management at the mine site? [	Please see attachment "R1_EMLI Geotech-Geoscience Comment IDs 308 316 389.pdf".		EMLI (G.Wolff)	KP		Dan/Cindy	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
389	Appendix 9-D ML/ARD	Geoscience	EMLI (G.Wolff)		Aug 05, 2022	2	Follow Up	Potential Permit Condition	Yes	Placement of PAG waste rock in the TSF and submergence within a relatively short timeframe appears to be the primary mitigation for ML/ARD generated by waste rock. Consequently, EMLI is considering a permit condition requiring the saturation of PAG waste rock within specific timeframes. Given the complexity of water management required to maintain waste rock saturation while meeting both the needs of the mill and downstream flow requirements, detailed contingencies for maintenance of the water cover during scenarios including a water deficit are expected to be further developed.	BW Gold acknowledges this comment.		EMLI (G.Wolff)	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
390	Section 3.2.1.1 of the Geochemistry Source Term Report	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.2.1.1 of the Geochemistry Source Term Report (Appendix A.6 to Appendix 5-D) indicates that NAG3, NAG4, and NAG5 waste rock loading rates were derived from all NAG HCTs, and that PAG1 and PAG2 neutral loading rates were derived from all neutral pH PAG HCTs. a.Please explain why one loading value was used for all NAG waste rock, apart from the parameters with pH correlations, despite the difference in ML classification between NAG3 waste rock and the remaining NAG units.	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
391	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	b.Were the individual HCTs weighted in any way in the loading rate calculations? If so, how were they weighted?	The HCTs were given equal weighting in the loading rate calculations.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
392	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	17.NAG5 HCT HC-17-01 was used as a source term for overburden loading rates. This HCT was constructed from felsic tuff material with 0.01 wt% sulphur. As the median sulphur concentration in overburden is 0.01 wt%, this appears to be a reasonable source term for Base Case calculations. However, it is noted that overburden sampling represents a wide range of overburden material, including till and weathered bedrock, and overburden samples at depth in the Open Pit and TSF areas and from the bedrock interface contained substantially greater sulphur and metal concentrations, including zinc concentrations in excess of the 600 ppm cut-off for NAG5 classification. a.Please provide further justification for the selection of HC-17-01 as representative of Base Case overburden loadings	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
392	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up		No	Further comments regarding overburden source terms are provided under Comment ID 376. [Closed]	BW Gold acknowledges that the comment is closed.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 4	Ready for Publishing
393	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	b.As HC-17-01 represents median sulphur concentrations for overburden material, 90th percentile loadings from this HCT may not be a reasonably conservative Upper Case source term. Please evaluate the sensitivity of this source term to the selection of an alternate HCT that is more representative of Upper Case overburden chemistry	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
393	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up		No	Further comments regarding overburden source terms are provided under Comment ID 376. [Closed]	BW Gold acknowledges that the comment is closed.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 4	Ready for Publishing
394	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Loading rates derived from HCT testing incorporate the first 52 weeks of leaching following the first flush, as waste rock stored in the TSF will be submerged within one year. Only PAG1, PAG2, and NAG3 waste rock will be submerged in the TSF—please explain why NAG4, NAG5, and overburden loading rates were also limited to 52 weeks	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
395	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Please replicate Figure 3-2 for all parameters with loading rates derived from pH correlations.	Please see attachment "R1_EMLI Geoscience Comment ID 395".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
395	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	"a) The correlations between HCT loading rates normalized to solid phase concentrations and pH are considerably weaker for arsenic, antimony, and lead than for other parameters presented. How has the potential influence of iron sorption been considered in the development of these regressions? Please provide additional rationale for using these regressions in the development of source terms for arsenic, antimony and lead, demonstrating that this is a conservative approach. [QP Response Required]	Please see attachment "R2_EMLI Geoscience Comment ID 395, 396, 397, 399".		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
395	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Aug 25, 2022	3	New	Information Requirement	No	a) Closed b) The response indicates that "waste rock management is based on ARD potential and does not distinguish between different types of NAG rock based on carbonate mineralogy". The comment referenced NAG waste rock segregation, which is based on solid phase zinc content--specifically, NAG3 material is managed as metal leaching and deposited in the TSF based on zinc concentrations. A wide	metal content. While the influence of pH should not be understated, the solid phase metal content remains a relevant characteristic for determining metal leaching potential. Solid phase metal content has the advantage of being readily determined through ICP assays, and has been measured in sufficient quantity and spatial resolution for trace metal content and NPR to be populated into the ARD block model. Generating data on carbonate abundance and mineralogy with sufficient resolution to		EMLI (G.Wolff)	Lorax		Georges		Ready for Submission	GM; Sept 15	Ready for Publishing

395	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Oct 11, 2022	4	Follow Up	QP Response Required	No	The correlation between pH and solid phase metal content developed in the Application indicates there is uncertainty in the use of just solid phase metal content for operational segregation of NAG3/4/5 waste rock, as higher loading rates may be observed from waste rock with lower metal content and vice versa. Considering this uncertainty, please demonstrate that the operational cut-offs, particularly for NAG3, are conservative. [QP Response Required]	Please see attachment "R4_EMLI Comment IDs 395".		EMLI (G.Wolff)	Lorax				Oct. 18	GM; Oct 19	Ready for Publishing
395	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Nov 02, 2022	5	Follow Up	Potential Permit Condition	Yes	Based on the data provided in the Application and subsequent responses, the uncertainty in the use of solid phase zinc content for operational segregation of NAG waste rock remains. In addition to previously noted expected permit conditions requiring ongoing evaluation of geochemical source terms and carbonate mineralogy, EMLI is considering a permit condition requiring reassessment of the operational waste rock classification and segregation criteria on an ongoing basis.	This comment is acknowledged.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Nov 10	Ready for Publishing
396	Section 3.4 of the Source Term Report	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.4 of the Source Term Report provides a scaling factor for "% of year frozen" of 0.33 (Table 3-7), with the accompanying text indicating that this represents 33% of the year. Scaling factors are stated to be incorporated into the source terms by simple multiplication. Please clarify if this specific scaling factor was incorporated by multiplication or by setting relevant loads to zero during those months. Additionally, explain how this correction was added to the temperature correction of 0.66 applied to all other source terms.	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
396	Section 3.4 of the Source Term Report	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	The response appears to indicate that both the "% of year frozen" and temperature correction scaling factors were applied to pit wall loadings. Please justify the use of a temperature scaling factor that accounts for annual field temperatures on loadings that are already set to zero during winter months, rather than deriving an alternate temperature scaling factor that excludes those months, or clarify further. [QP Response Required]	Please see attachment "R2_EMLI Geoscience Comment ID 395, 396, 397, 399".		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
397	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Mineral solubility limits have been applied to the WQM source terms at various locations including TSF waste rock, stockpiles, and the TSF ponds. An arsenic sorption model was also developed. Due to the greenfield nature of this Project, EMLI acknowledges that site-specific field-scale studies of geochemical attenuation mechanisms are not possible, and that modelling represents the best available information. In order to bracket uncertainty in the source terms, water quality predictions, proposed water quality mitigation requirements, and ultimately the reclamation liability, please produce an additional WQM sensitivity that does not include secondary mineral solubility limits for mine facilities, arsenic sorption, TSF pond solubility controls, or overburden solubility limits. Compare the results of this model sensitivity to the Base Case WQM results and identify which water quality mitigations proposed are sufficient under this scenario, and where additional mitigation may be required under this scenario.	The solubility constraints were developed in a conservative manner consistent with industry standard practice. The specifics of this rational are presented in the attachment "R1_EMLI Comment ID 397"		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	TD, 15-Jun	Ready for Publishing
397	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2		QP Response Required	No	"a) Tables 2-2 to 2-4 include barium (Ba) twice in the Parameter column. The second Ba is assumed to be beryllium (Be); however, it is noted that in several columns, the concentrations are repeated between the two rows (e.g., post-PHREEQC concentrations in Table 2-2). Please confirm if there is a simple typo in the Parameter column or if the data have also been repeated. [Clarification] b) Please confirm if the PHREEQC concentrations presented are inclusive of the arsenic sorption model. [Clarification] c) The memo states that solubility for the Lower Waste Stockpile was based on a combination of PHREEQC and solubility caps derived from SFE concentrations. Appendix 5-D to the Application states that 2021 SFE concentrations were used to cap the Lower Waste Stockpile source term. How was PHREEQC used in this source term? [QP Response Required] c) Were solubility limits in the TSF ponds only applied during the operations phase, as shown in Figures 2-1 to 2-8? If solubility caps were also applied in closure and post-closure, please provide similar plots for those phases. [QP Response Required] d) Dissolved aluminum concentrations in the TSF ponds appear to be controlled by the solubility cap (0.0026 mg/L) throughout operations. This limit is substantially lower than dissolved aluminum concentrations measured frequently in the receiving environment, including in background water quality used as inputs to the TSF ponds. Please provide further justification for the selection of this solubility cap. [QP Response Required]"	Please see attachment "R2_EMLI Geoscience Comment ID 395, 396, 397, 399".		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
397	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Aug 25, 2022	3		Potential Permit Condition	Yes	The application of concentration caps derived from SFE in addition to equilibrium modelling for LWS drainage is noted to result in substantial reductions in concentrations for several parameters including cadmium, copper, and zinc. SFE testing may not be a conservative measure of leachate concentrations due to the short time frame and high liquid to solid ratios employed. However, it is also understood that overburden data are influenced by weathered bedrock material that would not be expected to be placed in the LWS, that LWS contact flows will be captured and treated prior to discharge, and that additional contingencies are available for management of overburden material with elevated metal leaching. Ongoing monitoring of waste stockpile contact flows and consequent source term updates are expected to be a permit condition. [Potential Permit Condition]	BW Gold will be required to submit updates to the water quality model and reclamation program every five years. BWG suggests that potential source term updates based ongoing monitoring and research programs be a component of the Five Year Plan water quality model updates.		EMLI (G.Wolff)	Lorax		Georges		Ready for Submission	GM; Sept 15	Ready for Publishing
398	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	EMLI acknowledges that approximating geochemical attenuation via mineral solubility limits is a standard modelling technique, and that application of these mechanisms in models typically requires site-specific data for calibration and verification of modelling results. How has the evaluation of geochemical attenuation assumptions been incorporated into the site-wide monitoring programs?	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John, Meghan	GM	Ready for Submission	GM; June 22	Ready for Publishing
399	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Section 3.5 of the Source Term Report discusses lag time assumptions during operations and post-closure but does not discuss the closure phase. Please explain the lag time assumptions for exposed PAG material in the pit walls during closure. Additionally, please clarify if the assumption that 26% of exposed PAG2 pit wall rock will be acidic in post-closure indicates that the remaining 74% is not expected to generate acidity at any point over the modelled post-closure period	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
399	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	Comment not addressed. The Round 1 comment referred to the closure phase (i.e., during pit filling), not post-closure. [QP Response Required]	Please see attachment "R2_EMLI Geoscience Comment ID 395, 396, 397, 399".		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
400	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Source terms for tailings consolidation water were set as "equal to contemporary pond water predicted in GoldSim" for nitrogen species and major ions. Should this be understood as “contemporary” pond water upon deposition of tailings, or upon release of tailings void water?	The source term is set to contemporary pond water upon release of void water.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
400	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	Information Requirement	No	Please provide further rationale for the assumption that nitrogen species and major ions in tailings void water released through consolidation can be represented by contemporary pond water, demonstrating how tailings voids would not be expected to impact concentrations of these parameters in the TSF ponds. [Information Requirement]	A majority of tailings consolidation takes place in the first months after tailings slurries are discharged into the TSF. Therefore, contemporary pond chemistry which forms the initial tailings pore water is considered a reasonable estimate of major ions in consolidation water. Similarly, there will be limited time for redox processes to influence nitrogen speciation; therefore, the evolution of nitrogen speciation is not incorporated into this source term.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing

401	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	TSF D seepage chemistry is derived from a flow weighted average of the TSF pond over time, based on the assumption that loading from waste rock will be dominated by flushing of oxidation products. Does this mean that, following the final flush of loadings upon submergence, it is assumed that waste rock deposited in the TSF does not contribute any additional load to seepage passing through it?	Metal release associated with saturation of waste rock is modelled as a function of exposure time. The release of this geochemical load is conservatively assumed to be instantaneous upon submergence, rather than gradual over time. These peak concentrations are applied to water passing through waste rock throughout the operations and post-closure period, with no consideration of rinsing out of peak concentrations. The TSF D seepage source term presented in Table 4-8 of the Geochemistry Source Term Report (Appendix A.6 of Appendix 5-D) is applied into the Post-Closure period.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
402	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Assumptions for saturated waste rock are predominantly dependent on the results of two saturated column tests from 2014. The Application notes that additional waste rock saturated column tests were initiated in March 2021, but no leachate results are reported. Please provide a comparison of the 2021 and 2014 waste rock saturated column test results and comment on any implications for the assumptions presented in the Application regarding saturated waste rock.	This comment is acknowledged. The column test report will be provided once it is available.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
402	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	The requirement remains outstanding. Please provide the comparison as requested. [QP Response Required]	Based on a call held between EMLI, BW Gold and Lorax on Aug. 22, 2022, Lorax will continue to operate the column tests currently underway for two or three additional months until column pH achieves circumneutral water chemistry. The results of these tests will be provided in a report once all results are received, anticipated to be provided in early Q1 2023. In the Aug. 22 meeting, Lorax conveyed that the rock samples used in the ongoing columns tests were not intended to be used as 'base case' source terms, as the rock samples had an in-situ acidic pH which is not typical of mine rock from the deposit. Rather, the results of the		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 15	Ready for Publishing
403	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Please explain how the Open Pit geotechnical domains described in Chapter 3 of the Application (surficial materials, broken zone, competent rock) have been considered in the assumptions of pit wall loadings.	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
403	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	Clarification	No	Comment partially addressed. Please clarify if the blast damaged and blast fractured zones as mentioned in the response also accounted for the geotechnical domains described in Chapter 3 of the Application. [Clarification]	The geotechnical structural domains described in Chapter 3 of the Application were not incorporated into pit wall source term development.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
404	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	What is the rationale for using overburden SFE results to cap Sb concentrations specifically for the mine facilities source term?	Please see attachment "R1_EMLI Geoscience Comment IDs 390, 392-394, 396, 398, 399, 403, 404 and 407".		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
405	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	The Downstream Aggregate Borrow Area source term incorporates loading from overburden fill and from undisturbed ground. Please indicate if any loadings from the exposed borrow material were considered, or if these are intended to be represented by the overburden fill loadings.	The Downstream Aggregate Borrow Area source term is based on 50% of the area being covered with overburden fill and 50% remaining undisturbed. At the time of source term development, design details for this area were limited. As such, the source term was based on 2 m of overburden material placed over 50% of the area. The remaining 50% of the area was assigned the source term for reclaimed ground (i.e.., median water quality for WQ10). These two values were combined to provide an overall source term for the Downstream Aggregate Borrow Area. No additional loadings were applied.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
406	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The source term for "reclaimed surfaces" (surface runoff from mine components covered with overburden during reclamation activities, including dams, stockpiles, tailings beaches, and mine facilities) is derived from median background water quality results for station WQ10 in upper Davidson Creek; that is, the model assumes that loadings from these surfaces will be equivalent to completely undisturbed background catchment runoff. Additionally, no upper case source term was developed for these surfaces. These assumptions do not appear to be supported by the proposed reclamation plan, particularly for the tailings beaches. Please develop an additional source term that accounts for influences from remobilized overburden used in reclamation of these facilities, and discuss any changes to WQM predictions and long-term water quality mitigation and management requirements as a result of using this updated source term.	Model sensitivity will be provided with Round 2 comment responses, as discussed with EMLI and BW Gold Ltd. on 22-June-2022. A memo was submitted on August 16 " R1_EMLI Geoscience Comment ID 406		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	TD, 15-Jun	Ready for Publishing

406	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Sep 02, 2022	2		Information Requirement	No	The memo from Lorax states that "The model results associated with the revised Reclaimed Area source term indicate material consistent with overburden may not be suitable for mass application as a reclamation material due to estimated Cd concentrations unless runoff from reclaimed areas is managed in a manner that mitigates predicted BC WQG exceedances. These results will be used to guide reclamation material management and selection, which will be subject to ongoing refinement throughout the Project Construction and Operation phase." In this scenario, how would the reclamation material volume estimates for overburden as presented in the Application be affected? Would there be a potential reclamation material deficit? If so, what is the contingency to source reclamation material to meet end land use objectives for the TSF? [Information Requirement]	An updated reclaimed surface source term was developed in response to R1 EMLI comment 406. The new source term approach discussed with EMLI and BW Gold Ltd. on 22-June-2022 , incorporated an upscaling approach using scaled waste rock HCT loading rates. This approach resulted in a 15x increase in Cd concentrations (0.0000072 mg/L to 0.00011 mg/L) from the original source term used in the Base Case model (V13e). Applying an upscaling approach to overburden is considered highly conservative, as weathered overburden generally lacks reactive sulphide minerals and geochemical loadings would be limited to rinsing of residual oxide minerals. For additional context, the D-Cd guideline exceedances presented in attachment "R1_EMLI Geoscience Comment ID 406.pdf" are considered to present a relatively low risk to aquatic receptors during the Post-Closure phase. The magnitude of D-Cd guideline exceedances presented in that memo are low (1.3x the BC long-term water quality guideline (WQG) or less) and spatially limited to upper Davidson Creek. It is noted that all predicted D-Cd concentrations at WQ28 in the updated reclaimed source term model sensitivity fall below the BC long-term WQG when the guideline is calculated using the corresponding predicted hardness (in "R1_EMLI Geoscience Comment ID 406.pdf", predicted concentrations are conservatively screened against guidelines calculated using baseline monthly hardness). For the above reasons, we suggest that revaluation of the reclamation materials balance is not warranted at this time. Evaluation of mine water management during the Post-Closure phase is ongoing within the context of meeting long-term environmental targets (e.g., in response to Round 3 comment 411(c)).		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Sept 15	Ready for Publishing
406	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Oct 11, 2022	3		Potential Permit Condition	Yes	EMLI expects that standard permit conditions requiring research of reclamation materials and development of contingency plans to address potentially unsuitable reclamation material will apply. EMLI is also considering specific permit condition(s) relating to further geochemical characterization of overburden material intended for reclamation and contingency plans for material placement on tailings beaches that address volume requirements and geochemistry considerations. [Potential Permit Condition]	This comment is acknowledged.		EMLI (G.Wolff)	Lorax				Oct. 18	GM; Oct 19	Ready for Publishing
407	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Table 4-20 in the Source Term Report provides percent removals for the Membrane WTP. Please indicate if these removal percentages were applied at all times, or if there is a minimum parameter concentration below which reduced removal efficiency would be expected.	Membrane rejection rates are not expected to vary significantly with influent concentrations in the range of design feedwater. Rejection rates can decline at very low feed concentrations in some instances, but these are much lower than the expected influent water quality at Blackwater. However, rejection percentage is impacted by influent temperature, with higher temperatures resulting in higher salt passage (lower rejection) than lower temperatures. The cited reference sites and pilot results from which the rejections in Table 4-20 are taken have similar climatic conditions and water temperatures as what can be expected at Blackwater, so it is reasonable to use these rejections for calculation purposes in the Blackwater design. The removal percentages were applied at all times when water was being treated in the water quality model.		EMLI (G.Wolff)	Lorax	BQE	John	GM	Ready for Submission	GM; June 22	Ready for Publishing
408	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Table 4-21 in the Source Term Report provides Membrane WTP brine concentrations. Are these concentrations calculated/modelled based on removal rates and influent chemistry, or do they represent brine chemistry provided by in the WTP Design Report?	These brine concentrations presented in Table 4-21 were calculated using the removal rates and predicted influent chemistry (95th percentile influent water concentrations from the average climate scenario).		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 23	Ready for Publishing
409	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	Source terms for sludge by-products have not been developed. Synthetic precipitation leaching procedure analyses of sludge reported by McCue in Appendix 5-G were not considered in the WQM as they were representative of mildly acidic conditions. EMLI expects that detailed characterization of these materials under conditions that are more representative of the TSF ponds, and derivation of source terms, will be completed as indicated in the water quality model report and ML/ARD Management Plan.	BW Gold acknowledges the comment and will perform a detailed characterization of the sludge by-product once it becomes available.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 15	Ready for Publishing
410	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Potential Permit Condition	Yes	The Source Term Report notes that uncertainty in the associations between carbonate mineralogy and lithology may be improved by conducting mineralogical analysis to quantify relative proportions of carbonate minerals. Mineralogical testing is not included as part of the operational testing program proposed in the ML/ARD Management Plan. EMLI expects that further quantification of carbonate mineralogy in waste rock will be completed during operations.	BW Gold acknowledges the comment and can perform such studies when waste rock becomes available.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 15	Ready for Publishing

411	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The Pit Lake is expected to develop into a density stratified system, but was modelled as one fully-mixed reservoir. Due to the deposition of brine at depth in the Pit Lake, and the influences of pit seepage on zinc concentrations in the TSF C Pond and the TSF spillway in post-closure, pit stratification has the potential to significantly influence post-closure water quality, long term mitigation requirements, and the assessment of the reclamation liability. Please complete a WQM sensitivity incorporating Pit Lake stratification in post-closure. Please include an assessment of any proposed changes to post-closure water quality mitigation and/or management actions under this scenario. Please provide updated cost estimates for the Year +3 and LoM cost estimate as a result of this assessment. Please provide a determination on any recommended updates to the Base Case water quality model following that assessment.	A simplified two-cell pit lake model has been developed and results of that model can be provided to the MRC the week of July 10th. This model will be validated through a more robust quantitative pit lake dynamic model under development by Lorax. The results of this model will be integrated with the Application water quality model to evaluate the effects of predicted pit lake stratification on predicted mine and receiving environment water quality. The results of this model exercise will be presented in a memorandum provided to MRC on or before August 15, 2022. BW Gold will update the closure cost estimate for the Year +3 and LoM cost estimate if needed as part of its round 2 responses. This update would build upon the update being completed for round 1 responses and any other comments received during round 2.		EMLI (G.Wolff)	Lorax		Alan	GM	Ready for Submission	TD, 15-Jun	Ready for Publishing
411	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	Partial response received July 18th. Comments will be provided at a later date.	BW Gold acknowledges this comment and looks forward to discussing further in future Review rounds.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 5	Ready for Publishing
411	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Sep 02, 2022	3	Follow Up	QP Response Required	No	a) The pit lake surface receives acidic pit wall inputs and elevated loadings of several parameters, including zinc. Mineral solubility controls were applied to pit wall loading source terms but no additional geochemical modelling has been conducted for the pit lake. Please provide an estimate of water quality in the pit lake surface layer in post-closure that incorporates solubility controls as well as an estimation of pH levels. [QP Response Required] b) Zinc and cadium concentrations were predicted to increase above the "one cell" predictions in the surface layer in the Round 1 two-cell pit lake predictions, whereas concentrations of these parameters were predicted to be below the "one cell" predictions in the updated PitMod model. The dominant loading source of these parameters was stated in the Round 1 memo to be pit wall runoff. Please indicate the dominant source of zinc and cadmium loadings to the pit lake in the PitMod model and explain the cause of the observed reduction in predicted concentrations. [QP Response Required] c) The response notes that the pit is predicted to provide approximately 70-80 years of brine storage, and states that "given the time scales of brine storage, there is considerable time to modify water management strategies and re-evaluate the need for long-term treatment and alternative strategies for brine treatment and or disposal". Please provide a detailed plan for development of alternate long-term mitigation strategies for pit lake water quality. The plan must include specific research areas that will be addressed during the development of these mitigations and/or contingencies, timelines associated with each task within the plan, and must include a detailed cost estimate for the execution of the plan. [QP Response Required]	Please see Reponse ID 487 and 490. Please see attachment "R3_EMLI Comment ID 411_Part_a_and_b.pdf" Please see attachment "R3_EMLI Comment ID 411c..pdf"		EMLI (G.Wolff)	Lorax		Georges		21-Sep-22	GM; Sept 20 GM; Sept 27	Ready for Publishing
411	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Oct 11, 2022	4	Follow Up	QP Response Required	No	a) Closed b) Closed c) Response Pending	"R3_EMLI Comment ID 411c..pdf" was submitted on October 10, 2022		EMLI (G.Wolff)	Lorax						Ready for Publishing
411c	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Nov 01, 2022	5	Follow Up		Yes	a.EMLI acknowledges the suggested permit conditions, which will be considered during the reclamation liability cost estimate review. [Comment] b.The post-closure Membrane WTP is referred to as a nanofiltration (NF) system throughout the document. BW Gold had previously indicated that post-closure water treatment would use a reverse osmosis (RO) system, as part of the v13e water balance and water quality modelling updates discussed in the memorandum from Lorax dated June 29, 2022. Please clarify the system that BW Gold is applying to permit. [Clarification] c.EMLI requires the Near-term evaluations #1-3 listed in Appendix A to be provided during the Application Review stage. EMLI understands that the deliverables associated with these tasks are scheduled to be provided on November 15th, and will review the information when received. [Information Requirement] d.For each listed deliverable in the "Key Deliverables and Outcome" column of Appendix A, please indicate if the deliverable is intended to be internal or external (i.e., submitted to ENV/EMLI). Tasks #5 and 6 include delivery of interim modelling updates--please note that EMLI does not typically review interim or draft reporting. [Clarification] e.For Long-term task #2, please clarify if the cost estimate is intended to represent the pilot testing of the treatment system(s) in addition to the development of the report; if not, please indicate where these costs have been included. [Clarification] f.Long-term tasks #3 and 4 include deliverables that are listed as proposals. Is the cost assigned to these tasks the estimated cost to complete the proposals, or also to complete the testing and literature reviews? [Clarification]	a) BWG acknowledges the comment b) BWG would use a reverse osmosis (RO) system at post-closure c) The deliverable associated with these tasks are scheduled for Nov 22. Please see "R5_EMLI Comment 411c_Near Term Evaluations_Final.pdf" and "R5_EMLI Comment 411c_Near Term Evaluations_Responses.pdf" d) The deliverable would be external. e) Cost estimate is intended to represent the development of the report only because it should not incur additional capital or operating expenses to run the already deployed full-scale membrane system f) This cost relates to the completion of the proposal and excludes the toxicity tests.		EMLI (G.Wolff)	Lorax	BQE	Georges			GM; Nov 1	Ready for Publishing
411c	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Dec 14, 2022	6	Follow Up		No	EMLI Geoscience has reviewed the updated submission from BQE Water regarding long-term water treatment at the Blackwater Project in response to EMLI Geoscience Comment 411(c), titled "Post-Closure Water Treatment at Blackwater: Responses to ENV Information Requests", dated November 22, 2022. This report is intended to include near-term evaluations 1-3 from the work plan submitted by Lorax Environmental on October 10, 2022, as follows: 1.Identify if there is a preferred alternative treatment option for post-closure (excluding reverse osmosis or nanofiltration). 2.Report on alternative treatment option (if one is identified through the risk assessment). 3.Evaluate Parameters of Concern in post-closure. EMLI Geoscience has the following comment on the submission: The assumptions regarding the use of dilution to treat sulphate in pit lake discharge once the membrane system has been discontinued rely on potential maximum dilution factors and do not appear to have been modelled. The report includes a recommendation to investigate the feasibility of this option. EMLI expects that this investigation will be explicitly included in the near-term evaluation #5 from the long-term water treatment work plan submitted October 10, 2022, and will include the following: a.Updated water balance and water quality modelling, incorporating updated geochemical source terms and consideration of alternate sources of sulphate and metals (e.g., ARD from pit walls); and b.Management of solid by-products generated by ongoing treatment of metals and oxyanions following discontinuation of membrane treatment and brine production.	BW Gold acknowledges the reviewer's comments. Near-term evaluation #5 from the long-term water treatment work plan submitted October 10, 2022, will include the following: a.Updated water balance and water quality modelling, incorporating updated geochemical source terms and consideration of alternate sources of sulphate and metals (e.g., ARD from pit walls); and b.Management of solid by-products generated by ongoing treatment of metals and oxyanions following discontinuation of membrane treatment and brine production.		EMLI (G.Wolff)	BWG				TD, Dec 19	Ready for Publishing

411c	Source Terms and Water Quality Prediction		BC ENV		Dec 14, 2022	6	Follow Up		Yes	Below are ENV's comments based on our review of the response memos for R5_EMLI Comment ID 411c. To note, ENV is not expecting specific comment responses at this time, but rather is providing the below comments for consideration by BWG: 1.ENV is considering a condition in the Environmental Management Act (EMA) effluent permit that would require the development and submission of an updated water balance/water quality model to demonstrate the feasibility of the post-closure discharge scenario that involves mixing the pit supernatant with other lower sulphate water collected on the mine site, as well as treatment of metals to make the effluent suitable for discharge to Davidson Creek. The proposal of this requirement aligns with the R3 Comment 411c workplan tasks 5 and 6, which proposes an interim modelling update by June 1, 2023. Requirements of this condition could include: oA comprehensive model report, which would include all the model assumptions and results. oThe authorization of tailings discharge to the tailing storage facility may be contingent on submission of the model report, which is subject to approval by the director. oThe required timeline for submission of the updated model report is proposed to be June 2023 to allow for sufficient review and discussion by ENV and First Nations prior to referral to the director for decision, and assumes commencement of tailing deposition August 1, 2024. 2.This comment is not specific to the information provided in the above-mentioned memos, however important for consideration in post-closure water treatment and discharge planning. ENV notes that the water quality predictions for post-closure from the TSF spillway (WB/WQM v13e), which is assumed to be the end-of-pipe, are shown to be above the proposed permit limits in the current Major Works application (i.e., BC WQGs and proposed SBEBs) - reference Lorax memo "Water Balance/Water Quality Model Update" dated June 29, 2022. Whereas, the water quality predictions in Davidson Creek, immediately downstream of the discharge at WQ28 are shown to meet BC WQGs. Hence: oIt is assumed that a certain amount of dilution is being relied upon to achieve BC WQGs in the receiving environment downstream of the project during the post-closure phase. oProposal of an initial dilution zone (IDZ) is not considered to be part of the current application. oIn the event that BWG proposes this discharge scenario for authorization in future permit amendments for the closure/post-closure water management, then proposal and acceptance of an IDZ will be required. Refer to the ENV IDZ guidance document. oThe proposed permit limits in the current application are at or below BC WQGs or proposed SBEBs to	BW Gold acknowledges the reviewer's comments. BW Gold looks forward to reviewing the draft EMA permit and to discussing the proposed condition with ENV. BW Gold would like ENV to consider the proposed permit condition consider the final water balance/water quality model scenario (Task #7), which has a deliverable date of May 2024 - that culminates with a model report that summarizes key outcomes, recommendations, and updated Post Closure water management plan (if applicable) as opposed to Task #5, which would be an interim modelling update. BW Gold acknowledges the reviewers comments on water quality predictions for post-closure from the TSF spillway (WB/WQM v13e) and understands the inherent risk taken on by BWG when opting to take a phased approach to EMA effluent permitting.		EMLI (G.Wolff)	BWG					TD, Dec 19	Ready for Publishing
412	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Groundwater seepage flow paths were included in the WQM if predicted travel times were less than 125 years; otherwise seepage pathways were excluded from modelling. For seepage pathways included in the model, were travel times considered or was seepage assumed to report to the receptor instantaneously?	Seepage pathways included in the model were assumed to report instantaneously to the downstream discharge location.		EMLI (G.Wolff)	KP		Cindy	AT/KP	Ready for Submission	GM; Aug 6	Ready for Publishing
413	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Base case predicted zinc concentrations appear to increase over the post-closure period at several mine site facilities, including TSF C Pond and the Pit Lake, as well as in Davidson Creek. The primary source of zinc loadings to the Pit Lake during this period, as indicated by Figure B.4-4-4 in Appendix 5-D, is the exposed pit wall. Please explain the cause of this progressive increase in zinc concentrations in post-closure, and identify if similar increases are predicted to occur for other parameters.	Please refer to attachment "R1_EMLI Comment ID 413.pdf".		EMLI (G.Wolff)	Lorax		Colin	GM	Ready for Submission	GM; Aug 7	Ready for Publishing
413	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	Clarification	No	The memo response refers to the v12b water quality model results, and has therefore been superseded. However, in the v13e water quality predictions, several parameters are observed to increase in concentrations in the Pit Lake throughout Post-closure (e.g., sulphate, ammonia, zinc, cadmium), with a greater rate of increase than in the v12b results. Please indicate if the drivers for increased concentrations in the Pit Lake are the same in the updated model predictions as described in the Round 1 response (lack of pre-treatment, lower removal efficiencies, and/or elevated in pit wall runoff), or if there are additional contributing factors. [Clarification]	In the v13e model compared to the v12b model, the exposed pit wall area is greater due to the pit lake being managed to a lower elevation. This contact area represents a key loading source to the pit lake and results in the pit wall runoff term contributing a greater relative load of metals to the pit lake in the v13e model compared to v12b for parameters like Cd and Zn. Predicted pit lake concentrations for major ions like sulphate and ammonia increase in the v13e model over time compared to the v12b model due to Membrane WTP brine injection to the lower layer of the pit lake and updated brine source term assumptions applied in the latter model. One additional contributor to increasing pit lake concentrations in the v13e model compared to v12b relates to a modelling artifact in which the pit lake elevation decreases slightly over Post-Closure in the Variable Climate Case (refer to memo "**R1_EMLI Geoscience 411, CSFN 844, LDNUFN 1280, 1281, 1309, 1344-1346, 1348, 1624_Two-cell pit lake WQM.pdf**" for further detail). This artefact decreases the volume of available water to which source term loads are applied, resulting in an apparent concentration increase over time. In actuality, the pit lake will be managed at a constant elevation and this decrease in elevation would not occur.		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 15	Ready for Publishing
414	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	The WQM report states that "it is anticipated that the designs resulting from the reclamation programs will help further reduce the likelihood of WQG exceedances during the Closure and Post- Closure periods". Please indicate the specific reclamation programs that are anticipated to reduce water quality concentrations in closure and post-closure, considering that WQG exceedances during this period appear to be driven by Pit Lake and TSF water quality.	Model sensitivity will be provided with Round 2 comment responses as discussed with EMLI and BW Gold Ltd. on 22-June-2022.		EMLI (G.Wolff)	Lorax	KP/BWG	Meghan, Cindy	GM	Ready for Submission	TD, 23-Jun	Ready for Publishing
414	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	Information Requirement	No	Response pending, EMLI will provide further comment once the outstanding information is received.	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-Closure phases. Updated water quality predictions that reflect optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the receiving environment are no longer predicted to exceed BC WQGs. Please refer to the document cited below for further information, including optimized water management proposed for the Closure and Post Closure phases to mitigate previously-predicted BC WQG exceedances in the receiving environment. As such, specific reclamation programs designed to decrease receiving environment concentrations below BC WQGs are not proposed at this time. Document: "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf" In addition to the above work, an updated source term was developed for reclaimed areas and evaluated in a model sensitivity. The results of this work are documented in " R1_EMLI Geoscience Comment ID 406".		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 5	Ready for Publishing
414	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Sep 02, 2022	3	Follow Up	Comment	No	EMLI understands that BW Gold is not proposing to conduct the reclamation programs reference in the Round 1 comment, and that consequently the statement from the WQM report is not considered to be current. [Comment]	The reviewer is correct in that BW Gold will not conduct the reclamation programs described in Round 1 that would have focussed on mitigating the predicted water quality guideline exceedances presented for the v12b water quality model results presented in the Application. However, BW Gold will continue to evaluate and develop reclamation programs through the Project Construction and Operation phases as presented in Chapter 4 of the Application to minimize potential effects to the Project environment upon the Closure and Post-Closure phases.		EMLI (G.Wolff)	Lorax		Georges		Ready for Submission	GM; Sept 16	Ready for Publishing

415	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Water quality modelling indicates that in post-closure, regular exceedances of several water quality guidelines are predicted for the TSF spillway and Davidson Creek, including acute water quality guideline exceedances in Davidson Creek associated with the TSF spillway overflow and pit seepage to the spillway. These predictions are observed under Base Case modelling. Although EMLI understands that BW Gold is not currently applying for a discharge permit corresponding to the TSF spillway in post-closure, these predictions represent water quality that would not be suitable for direct discharge, and indicate that existing ML/ARD and water quality mitigations incorporated into the mine design and WQM are inadequate to ensure water quality discharge in post-closure is protective of the receiving environment. Several contingencies are noted in the Application in the event that TSF spillway water quality is not suitable for discharge to Davidson Creek, such as pumping to the Membrane WTP, routing discharge to the Pit Lake or TSF for temporary containment, and increasing WTP capacity. However, given the frequency and regularity of exceedances in post-closure, detailed mitigation planning is required to ensure these options are feasible and effective. Please provide a detailed mitigation plan for post-closure water quality exceedances associated with TSF spillway overflow. The mitigation plan must include the level of detail described for mitigation methods in Section 5.6 of the JAIR, and must also include a detailed cost estimate for the proposed mitigation(s).	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-Closure phases. Updated water quality predictions that reflect optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the receiving environment are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information, including optimized water management proposed for the Closure and Post Closure phases to mitigate previously predicted BC WQG exceedances in the receiving environment. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		EMLI (G.Wolff)	Lorax	KP	Meghan, Cindy	GM	Ready for Submission	GM; June 27	Ready for Publishing
415	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	a) The updated brine source term is stated to be "calculated within GoldSim on a monthly basis from the WTP influent water quality". What are the inputs to this calculation? [QP Response Required] b) Pit lake water quality predictions for post-closure include elevated concentrations of several parameters, including zinc concentrations in excess of 3 mg/L. What pH values are predicted to be observed in the pit lake in post-closure? Has geochemical equilibrium modelling of the pit lake post-closure water quality been conducted? [QP Response Required]	Please see attachment "R2_EMLI_Geoscience Comment ID 415.pdf"		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 12	Ready for Publishing
415	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Aug 25, 2022	3	New	Comment	No	Further comment on the predicted pit lake post-closure water quality will be provided as part of Comment 411, once the full response to that comment has been received. [Comment]	This comment is acknowledged.		EMLI (G.Wolff)	Lorax		Georges		Ready for Submission	GM; Sept 16	Ready for Publishing
416	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Comment	No	The seepage rate sensitivity demonstrates that seepage contributions from the LGO stockpile have the potential to significantly impact water quality in the WMP and in Davidson Creek. LGO stockpile seepage management and monitoring are therefore a vital component of ML/ARD and water quality management during operations.	This comment is acknowledged.		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	RT; June 15	Ready for Publishing
417	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The modelled results from the seepage rate sensitivity appear to be significantly influenced by the LGO stockpile contributions, and consequently it is challenging to identify the impacts of increased seepage rates on downstream water quality. Additionally, the impacts of increased pit seepage in post-closure are not considered. Substantial uncertainty in the TSF seepage rates was identified in the review of the numerical groundwater modelling. Please develop an additional seepage WQM sensitivity that excludes the LGO stockpile contributions and accounts for increased seepage rates from the Pit Lake as well as the TSF.	BW Gold acknowledges the noted uncertainty in seepage and potential changes to predicted receiving environment water quality and quantity. A sensitivity will be conducted to address Comments 130, 142, and 417. The predicted water quality results of model output will be presented in a memorandum provided to MRC on or before July 20, 2022.		EMLI (G.Wolff)	Lorax		Travis	GM	Ready for Submission	TD, Jun 27	Ready for Publishing
417	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Aug 05, 2022	2	Follow Up		No	a) The TSF increased seepage sensitivity scenario includes water management changes to maintain saturation of PAG waste rock in TSF D, including pumping ECD water to injection wells in TSF D waste rock during Closure and pumping Membrane WTP effluent to the TSF D Pond in Post-Closure. In this scenario, are any changes to water management required during Operations? [Clarification] b) During Closure, ECD water is injected into waste rock in TSF D. Is this flow modelled as contributing directly to the TSF seepage pathway or does it contribute to the TSF D Pond water quality? [Clarification] c) Are the injection wells in TSF D waste rock in Closure intended to be established in the Base Case scenario or do they constitute new water management infrastructure for the increased seepage scenario? If the latter, what operational triggers will determine the need to install these wells? [Information Requirement] d) How would the redirection of ECD water to TSF D waste rock in Closure impact the time required to fill the Open Pit? [Clarification] e) The responses to increased seepage are noted to consist of an increase in treatment rate and additional pumping of water to TSF D. What other mitigations or contingencies have been considered to address increased seepage losses from the TSF? [Information Requirement] f) Higher concentrations are noted in the TSF seepage scenario in the Membrane WTP effluent due to increased brine disposal in the pit lake associated with higher treatment rates. At the increased treatment rate, how would the time to effectively fill the pit lake with brine (as discussed in Comment #433) change? [Clarification] g) As the increase in treatment capacity impacts the effectiveness of the treatment system, is there an upper limit to the treatment capacity beyond which point the volume of brine generated makes treatment unfeasible? If so, what TSF seepage rates would lead to this scenario? [QP Response Required]	Please see attachment "R2_EMLI_Geoscience_Comment ID 417.pdf"		EMLI (G.Wolff)	KP	Lorax			Ready for Submission	TD, Aug 16	Ready for Publishing
417	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Sep 02, 2022	3	Follow Up		No	a-f) [Closed] d-f) [Closed] g) Response Pending h) [Closed] i) [Closed]	Please see attachment "R3_EMLI Comment ID 417g.pdf"		EMLI (G.Wolff)	KP	Lorax/ERM/ BWG	Cindy, Meghan, Rolfe, Alastair	AT/KP	Ready for Submission	KP, Sep 30	Ready for Publishing
417j	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Sep 02, 2022	3	Follow Up		No	j) Response outstanding, pending submission of closure cost estimate.	Please see attachments "R3_EMLI Comment ID 417j.pdf" and "R3_EMLI Comment ID 417j.xls"		EMLI (G.Wolff)	ERM				Oct.7	AT: October 10	Ready for Publishing
417	Source Terms and Water Quality	Geoscience	EMLI (G.Wolff)		Oct 11, 2022	4	Follow Up		No	j) Response outstanding, pending submission of closure cost estimate.	Please see attachments "R3_EMLI Comment ID 417j.pdf" and "R3_EMLI Comment ID 417j.xls"		EMLI (G.Wolff)	ERM						

417	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Oct 11, 2022	4	Follow Up		No	1.Section 2 of the memo indicates that there should be two Excel spreadsheets provided ("J.6 Y+3 BW Closure Estimate.xlsx" and "J.6 LOM BW Closure Estimate.xlsx"); however, only one spreadsheet was attached, which appears to be the Y+3 estimate. Please provide both spreadsheets. 2.Please provide a clear summary of both discounted and undiscounted costs for both the Y+3 and LoM scenarios, or indicate where this summary can be located. Table 4 in the memo has some of this information but is missing the undiscounted costs for discounted items (that is the, the cost if discounts are not applied to any line items). 3.Mob/demob costs are noted to have been assigned a value of 2%. As per the interim Major Mines Reclamation Security Policy, mob/demob costs may be estimated as 5% of the value of the physical work to be conducted. Please update the cost estimate accordingly or provide further rationale for the value selected.	Please see updated attachments"R3_EMLI Comment ID 417j.pdf" "J.6 LoM BW Closure Estimate" and "J.6 Y + 3 BW Closure Estimate" and "RLCE update Cover Letter.pdf" 1) Both current versions of the spreadsheets have now been provided to EMLI, and as were used as the basis for discussion on 31/10/2022 between EMLI, Artemis, CSFN, ERM and other First Nations. 2) The summary is provided in the update J.1 versions of the spreadsheets for both Y+3 and LoM scenarios. 3) Mob/demob cost allowance of 5% is now applied in the spreadsheets and depicted in the Summary tab.		EMLI (G.Wolff)	ERM					TD, Nov 21	Ready for Publishing
417	Source Terms and Water Quality Prediction	Geoscience	EMLI (G.Wolff)		Nov 03, 2022	5	Follow Up	Information Requirement	Yes	The request was to provide any updates to the Y+3 and LoM cost estimates as a result of the water management changes in Closure and Post-Closure associated with the increased seepage sensitivity scenario. This information could not be located as part of the updated cost estimate submission. Please provide the requested information or indicate where it can be located. [Information Requirement]	The RLCE Y+3 and LoM cost estimate for seepage recovery is based on the current water quality model and pumping estimates are costed accordingly. During Post-closure, should seepage occur which exceeds the predicted values, then the cost of additional pumping would be covered in the contingency amount ($30M) of the liability estimate. The seepage estimates will of course be revisited during mine operations and regular water management updates through LoM to inform Closure requirements.		EMLI (G.Wolff)	ERM		Rolf				
418	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Appendix 9-E provides a list of mine site and discharge water quality monitoring locations, including WTP influent and effluent streams, TSF ponds, the Pit Lake, and various collection ponds on the mine site. Monitoring of the WTP brine stream directed to either the pit lake or the TSF was not identified in this Plan. Please indicate if water quality monitoring of WTP brine is planned; if not, please indicate how the influences of this input to pit lake and/or TSF water quality are intended to be captured and how water quality modelling assumptions will be validated.	Brine water quality will be continuously monitored via calculation. Brine WQ can be calculated by performing a mass balance of constituents with the feed and permeate water quality results. Brine conductivity will be continuously monitored by inline instruments and serves as a proxy indicator of overall water quality. Sampling and assay by third-party labs will periodically be conducted to validate the calculations.		EMLI (G.Wolff)	Lorax	KP/BQE	Meghan, Stephanie, Cindy, V.Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
418	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	Please clarify the statement that brine water quality will be calculated continuously based on feed and permeate water quality results, if most water quality monitoring for the WTP influent and effluent occurs weekly or monthly according to Table 9-1 in Appendix 9-E. Provide an update to Table 9-1 that includes brine water quality monitoring. [QP Response Required]	Please see attachment "R2_EMLI_Geoscience_Comment Response 418.pdf"		EMLI (G.Wolff)	BQE				Ready for Submission	GM; Aug 16	Ready for Publishing
419	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Appendix 9-E, Table 9-1 indicates that seepage surveys "will be carried out regularly to identify seep locations; per ML/ARD Management Plan". The referenced plan does not appear to discuss seep surveys. Seep surveys are discussed in Section 7.3.4.4 of the Mine Water and Discharge Management Plan. Please clarify if there is additional information that should be included in the ML/ARD MP	This was an editorial error. The correct reference is for Section 7.3.4.4 of the Mine Water and Discharge Monitoring Plan.		EMLI (G.Wolff)	Lorax	KP	Meghan, Jordan, Cindy	GM	Ready for Submission	GM; June 23	Ready for Publishing
420	Water Management - Appendix 9-E, Appendix 4-J	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	Appendix 4-J indicates that in a temporary closure scenario, water management activities would proceed as during operations, including pit dewatering and operation of WTPs. Several of these activities would only be effective mitigation strategies in the short term, due to the effects of ongoing oxidation of the LGO stockpile and exposed tailings beaches, and the accumulation of treatment by-products in the TSF. What is the maximum period of time that operational water management can be maintained under temporary closure conditions before partial or full closure of these facilities (i.e.., relocation of LGO stockpile, flooding of Open Pit, reclamation of tailings beaches) would be required?	A number of Care and Maintenance (i.e.., temporary closure) water balance/water quality scenarios are being developed and will be provided near the end of July 2022. This imperial data can be used to follow-up with a response to this comment. Please see response to Comment 441 for more information on the C&M modelling scenarios.		EMLI (G.Wolff)	Lorax	KP	Meghan/Cindy/Dan	GM	Ready for Submission	GM; June 29	Ready for Publishing
421	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The maximum flow rate of 205 L/s influent to the Metals WTP is estimated for Year -1 to 17. This influent flow rate is based on monthly average flows corresponding to average annual climate inputs. Please provide the rationale for basing the design of the WTP and the metals treatment pond(s) on average flows.	R1_EMLI_Geoscience_Comment ID 421, 422, 424, 425		EMLI (G.Wolff)	McCue		Lynda Smithard	GM	Ready for Submission	GM; June 17	Ready for Publishing
422	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	What triggers are proposed to identify the requirement for expedited construction of Metals WTP trains C & D?	R1_EMLI_Geoscience_Comment ID 421, 422, 424, 425		EMLI (G.Wolff)	McCue		Lynda	GM	Ready for Submission	GM; June 17	Ready for Publishing

423	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Does the WQM during variable climate scenarios incorporate untreated bypass water from the metals treatment pond(s) to the TSF?	No water is modelled to bypass the Metals WTP untreated. In wet conditions, should water exceed the upstream WTP ponds capacity (9,000 m3), the pit sump is assumed to manage additional volumes of water until treatment capacity resumes. Results of the predicted Metals WTP influent rates and simulated storage requirements under variable climate conditions are discussed in Section 6.3.4.1 of the Life of Mine Water Balance Report in Appendix 5-B.		EMLI (G.Wolff)	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
423	Water Management - Appendix 9-E	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	Clarification	No	This response appears to partially contradict the response to Comment 423, which states that WTP pond overflow would be discharged to the TSF if the capacity is exceeded. Please confirm if WTP bypass to the TSF is considered in the event that WTP pond capacity is exceeded. [Clarification]	The simplifying assumption included in the water balance model is that any water in excess of the Metals WTP is modelled as held in the open pit sump. The response to Comment #421 authored by McCue (2022) suggests the overflow could go to the TSF, which is another option for managing overflow from the Metals WTP; however, this option was not assessed with the water balance model. The predicted volume of water that could be in excess of treatment capacity at the Metals WTP during wetter than average conditions is discussed in Section 6.3.4.1 of the water balance model report presented in Appendix 5-B. Notwithstanding the response to Comment #421 by McCue (2022), the base case simplifying water management assumption for modelling purposes was to hold water in excess of the Metals WTP influent rate in the open pit sump. Please also see the response to Round 2 Comment 351 about how inflows to the Metals WTP Pond are planned to be managed at the waste stockpile collection ponds.		EMLI (G.Wolff)	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
424	Water Treatment Appendix 5-G	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The Metals WTP design report (Appendix 5-G) notes that if the final concentrations for the combined sources vary from the estimates show in Table 2.2-1 of the design report, then the estimate of effluent quality may not be valid. Please provide the range of influent quality for which the effluent quality estimate is valid. Is the effluent quality estimate affected by influent water quality that is more dilute than estimated? Please provide an assessment of the likelihood of realizing influent quality at the end members of that range	Please see attachmment "R1_EMLI_Geoscience_Comment ID 421, 422, 424, 425.pdf"		EMLI (G.Wolff)	McCue		Lynda Smithard	GM	Ready for Submission	GM; June 17	Ready for Publishing
425	Water Treatment Appendix 5-G	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The Metals WTP design report (Appendix 5-G) acknowledges that additional information is required to confirm assumptions regarding suspended sediment loading to the WTP: a.What is the proposed plan including timeline for developing this required information, including both TSS and total metals concentrations estimates, as well as determining if additional settling capacity or secondary/advanced water treatment processes are required? b.Please provide a cost estimate associated with these additional studies. c.What additional source control practices could be implemented to reduce solids loading into the pit sump and OBS runoff? What is the rationale for not including the source control practices at this time?	Please see attachmment "R1_EMLI_Geoscience_Comment ID 421, 422, 424, 425.pdf"		EMLI (G.Wolff)	McCue	BWG	Lynda Smithard	GM	Ready for Submission	GM; June 17	Ready for Publishing
425	Water Treatment Appendix 5-G	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	New	QP Response Required	No	a. Please provide a timeline for when the TSS and total metal concentrations estimates, prepared by others, will be provided to McCue. [Information Requirement] b. [Closed] c. [Closed]	a. Please see attached memo "R2_EMLI_Geoscience_Comment ID 425.pdf"		EMLI (G.Wolff)	McCue		Kareena Gill		Ready for Submission	GM; Aug 12	Ready for Publishing
426	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	The Membrane WTP design report (Appendix 5-H) recommends bringing the full-scale RO system online in Year 1 to demonstrate performance. Is the intent to operate a pilot or field study at site in advance of full-scale WTP operation?	The site water balance does not require operation of the membrane WTP during the early stages of the mine life. The intent is to operate the membrane WTP during this phase in order to inform final design of the post-closure WTP and also to serve as a contingency in case there is an unforeseen need to treat TSF water during operation. This could be considered a "full scale field study". It affords opportunity for process and operability optimization prior to the requirement to discharge. It also allows for design learnings to be incorporated into the post-closure plant design/operations.		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
426	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please state the mine year when the membrane WTP is intended to be constructed. [Information Requirement]	D.1_Blackwater_MAEMA_Ch3 Mine Plan (page 3-58) states that Membrane WTP will be constructed in year -1.		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; July 29	Ready for Publishing
427	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Information Requirement	No	The Membrane WTP is noted as being able to ramp-up to maximum plant capacity quickly when needed. What is the length of time required to ramp-up from not operating to fully operational?	With adherence to good routine maintenance and preservation practices, the plant could achieve full capacity operation in less than one week from full shutdown. If the plant is operating in recycle/low flow, it could be ramped up in less than 12 hours.		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
428	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	The by-product stream chemistry (retentate water quality) presented in Appendix 5-H notes that other by-product streams blended with the retentate, including MMF backwash, spent CIP solution, and spent permeate, are not considered due to making a negligible contribution to the overall stream. Please further demonstrate that the contribution of these streams, particularly the MMF backwash, is negligible.	Please see attachment "R1_EMLI_Geoscience_Comment IDs 428, 429, 432.pdf"		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
429	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Removal rates provided for the NF and RO Membrane WTPs are based on predicted influent water quality and presented as a percentage removal for each parameter. Across what range of variability in influent chemistry are the assumed removal rates considered valid?	Please see attachment "R1_EMLI_Geoscience_Comment IDs 428, 429, 432.pdf"		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing

429	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	Clarification	No	Please confirm if the response should be understood to mean that the same percentage removal would be expected if influent concentrations are lower than predicted. [Clarification	Percentage removals are valid in the range of 500-4700 mg/L total dissolved solids (TDS). Average and 95th percentile predicted TDS are ~3800 mg/L and ~4700 mg/L, respectively.		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; July 29	Ready for Publishing
430	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Does the WQM incorporate water quality influences to the TSF and Pit Lake from the solid residues generated by the Membrane WTPs? If not, are these solids intended to be characterized with the sludge from the lime neutralization system and Metals WTP?	Please see attachment "R1_EMLI_Geoscience_Comment ID 430.pdf"		EMLI (G.Wolff)	Lorax		John	GM	Ready for Submission	GM; June 23	Ready for Publishing
430	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	Potential Permit Condition	Yes	As noted in Comment 409, EMLI expects that characterization of WTP solid by-products will be conducted and results incorporated into site-wide water quality modelling. [Potential Permit Condition]	Thank you for this response. It is noted that detailed characterization of sludge solids is not proposed at this time. This relates to: 1) data for the Equity Mine present a reasonable analogue for the Project; 2) there is a very low likelihood that sludge materials will have an influence of TSF seepage chemistry; and 3) the impracticality of generating the mass of sludge required to conducted kinetic testwork. Each of these points is discussed in turn below. As shown in Martin et al. (2013), influent chemistry is a strong predictor of the metal hosting phase(s) in sludge materials as generated through water treatment. For example, ratios of Mg-Al-Fe for the Blackwater influent show a strong similarity to that of the Equity Mine, which produces an Al-Mg-(Fe) hydroxysulfate metal hosting phase. This phase has been shown to be chemically stable under conditions of saturation in their place of deposition (pit lake). In this manner, the information available for the Equity Mine is considered to represent a reasonable analogue for the Blackwater Project. The combined mass of the sludge materials from both the Lime Neutralization and Metals Removal systems will represent <0.05 % of the total mass of tailings and waste rock. Given the relatively small volumes of lime treatment sludges as compared to tailings and waste rock, and the inferred degree of chemical stability (as per the Equity Mine analogue), sludge materials are not predicted to significantly influence TSF seepage chemistry. Lastly, the generation of the required sludge mass for kinetic testwork would require the treatment of 100's of litres of synthetic influent. This is impractical, and may not yield representative materials. To confirm the assumptions above relating to sludge chemical stability, treatment sludges from the WTPs are proposed to undergo detailed characterization within the first two years of operation. Such testwork will include detailed solid-phase characterization (grain size, elemental abundance, sequential extractions, high resolution microscopy) and kinetic testwork (saturated columns).		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 12	Ready for Publishing
430	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Aug 25, 2022	3	Follow Up	Potential Permit Condition	Yes	EMLI acknowledges the response and understands that detailed characterization of treatment sludges would occur during early operation of the WTPs, when representative materials are available in the required volumes. [Potential Permit Condition]	This comment is acknowledged.		EMLI (G.Wolff)	Lorax		Georges		Ready for Submission	GM; Sept 16	Ready for Publishing
431	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	Clarification	No	Appendix 5-H lists a recommended assay analysis schedule for identifying concentrations at key locations in the treatment train. Will these assays be conducted at the onsite laboratory or shipped offsite?	The intention is to conduct on-site assays in order to guide day-to-day operational decisions. Field measured analysis will be validated with a third-party off-site accredited laboratory. Third-party laboratory results will be used for proof of treated water regulatory compliance.		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
432	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	No	Appendix 5-H notes that demineralization of the effluent as part of the treatment process has the potential to cause effluent toxicity, and that this risk can be mitigated by implementing sodium bicarbonate addition to the treated water as required. How will the potential need for bicarbonate addition be identified during WTP operations?	Please see attachment "R1_EMLI_Geoscience_Comment IDs 428, 429, 432.pdf"		EMLI (G.Wolff)	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing

433	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jun 01, 2022	1	New	QP Response Required	Yes	No end-date for water treatment in post-closure has been proposed in the Application. As brine from the Membrane WTP is deposited in the Pit Lake, how long will it take for the Pit Lake chemistry to be dominated by the brine chemistry?	Please see attachment "R1_EMLI_Geoscience_Comment ID 433.pdf"		EMLI (G.Wolff)	Lorax		Alan	GM	Ready for Submission	GM; June 29	Ready for Publishing
433	Water Treatment Appendix 5-H	Geoscience	EMLI (G.Wolff)		Jul 22, 2022	2	Follow Up	QP Response Required	Yes	Does this response account for the reduced pit volume as a result of the updated modelling (v13e)? If not, please update the response accordingly. [QP Response Required]	Please see attachment "R2_EMLI_Geoscience Comment ID 433.pdf"		EMLI (G.Wolff)	Lorax				Ready for Submission	GM; Aug 11	Ready for Publishing
434	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Weathering of Material	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must incorporate the age of material on surface into the development of source terms for material stockpiled on surface. Material stockpiled on surface will oxidize over time, which will increase rates of metal release. A possible permit condition can be developed for reporting and reconciliation. (Source Comment ID#1)	The age of material stockpiled at surface is incorporated into source term derivation in multiple ways. Source terms include the lag time until acid rock drainage incorporates for PAG 1 and PAG 2 rock units, which allows the model to reflect gradual acidification of material over variable exposure times. The age of waste rock is also incorporated into the submergence calculations, where it is used to calculate the oxide load that may be released to pore water upon saturation. The LGO stockpile is assumed to be immediately acid generating as a conservative approximation, without considerations of lag time. Please refer to Section 3.5 of Geochemical Source Term report for discussion of lag time to ARD. In terms of monitoring, the Operational mine site water quality will be compared to predicted concentrations. If the concentrations exceed predictions, potential actions include follow up investigations and potential additional sampling or increased monitoring frequency. Further details on potential adaptive management measures for specific facilities are included in Table 11-1 of Appendix 9-E Mine Site Water and Discharge Monitoring and Management Plan.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
434	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Weathering of Material	CSFN - K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 23, 2022	2	Follow Up	Information Requirement	No	It is understood that the source terms appropriately and conservatively incorporate the age of rock. It is requested that an inventory of rock ages be maintained through operations so that source terms can be refined and help manage waste. (Source Comment ID#1)	This comment is acknowledged. Requirements to maintain an inventory of waste rock age will be incorporated into the next iteration of the ML/ARD management and monitoring plan		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
434	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Weathering of Material	CSFN - K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Thank you. The ML/ARD management and monitoring plan or MA permit Annual Report should include an inventory of waste rock volumes, tailings volumes, and LGO volumes, mined during that year, as well as the cumulative volumes and corresponding ages of each waste type. This is in addition to the ABA and NPR of the material. The location of the inventory of waste on site, and the geochemical characteristics, should be referenced in the permit. (Source Comment ID#1)	The comment is acknowledged and these material types will be identified as requiring inventory and age tracking in the ML/ARD Management Plan. The inventory itself would be presented in the Annual Report, not the Management Plan.		CSFN	Lorax				Ready for Submission	TD, Oct 19	Ready for Publishing
435	Chapter 2: Baseline Information	Milling Oxidized LGO	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must include distinct source term development for the LGO including the impact of weathering of material. The Application must assess the impact of the proposed large ore stockpiles as they tend to be problematic when milled, causing increased concentrations of oxidation products (sulphate, metals) in the tailing's facility. (Source Comment ID#2)	A distinct source term was developed for tailings and supernatant produced from processing LGO ore. Refer to section 4.1.5 and section 4.1.4 in the Source Term Report for details.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
436	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Source Term Revision	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must present and describe differences between new and old source terms where source terms have been updated since EA. (Source Comment ID#3)	A summary of the changes to source terms between the EA and the current application was provided in Table 1-2 of the Geochemistry Source Term Report (Appendix A.6 of Appendix 5-D).		CSFN	Lorax		John	GM	Ready for Submission	GM; June 16	Ready for Publishing
437	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Source Term Analogue Sites	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Application must compare source terms for the Blackwater project to those of analogue sites. In previous modeling, the pit wall source term appeared to underestimate sulphate loading. (Source Comment ID#4)	Analogue mine data from similar mine sites was incorporated into the source term predictions to calibrate degradation rates of cyanate and ammonia in the tailings pond at the Project, to develop a relationship between metallurgical supernatant and full-scale mill process water chemistry, to constrain the source term for concentrations from acidic LGO stockpile runoff, and to define source terms for lime neutralization treatment effluent. An overview is included in Section 2.9 of the source term report (Appendix A.6 of Appendix 5-D) and details are provided in Sections 3.7, 4.1.5, 4.3, and 4.7.3.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
437	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Source Term Analogue Sites	CSFN - K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 23, 2022	2	Follow Up	Recommendation	No	Please compare the sulphate predictions to analogue mine sites with similar amounts of exposed PAG surface areas to confirm that sulphate is expected to be well below gypsum saturation (assuming calcite buffering - acknowledging sodium will significantly increase this concentration). (Source Comment ID#4)	Please see attachment "R2_CSFN_Comment IDs 437 and 558.pdf"		CSFN	Lorax				Ready for Submission	GM; Sept 2	Ready for Publishing
437	Chapter 2: Baseline Information	Geochemistry and ML/ARD: Source Term Analogue Sites	CSFN - K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: A permit condition regarding model validation is outlined in the Round 3 comment under ITT ID 572. In additional to model validation, the following permit condition is recommended. In the second year of operations, the source terms, water balance, and water quality model must be updated based on observed information (flow and water quality) during the first year and a half of mining. The water balance and water quality model update should include the following items: •A list of assumptions and a description of how they differ from initial assumptions. •A list of all inputs and all associated uncertainties. •The PAG source term must discuss the potential range in potential pH, and a discussion of metal leaching rates at multiple pH values for all parameters sensitive to pH. •The source terms must consider seasonality based on observed data. •The variability of concentrations in the receiving environment must be considered to a minimum of the 75th percentile of the observed concentration at each model node / water quality monitoring station. •The model must continue until steady state conditions are attained in all model reservoirs for flow and water quality. •A 1:100 year wet and dry event must be incorporated into the VCC case for all stochastic scenarios, and if treatment capacity is exceeded or water covers are not predicted to be maintained during any year of mining, a table describing the available storage volumes and or water needs must be clearly presented in the report. •A comparison to initial predictions should be provided. •The source terms, water balance, and water quality model assumptions, inputs, results, and discussion should be documented in a report and submitted to CSFN for review prior to Dec 31st of the second year of operations. Note: Given the high risk and reliance of this site on treatment, waiting five years for a model update is not acceptable or protective of the environment, particularly if treatment targets cannot be achieved consistently. (Source Comment ID#4)	A workplan presenting the details of the water balance and water quality modelling will be compiled for review prior to the modelling exercise. The workplan will be provided within the first year of operations for review and discussion. The workplan will consider the items listed by the reviewer		CSFN	BWG	KP Lorax		GM	Ready for Submission	GM; Oct 26	Ready for Publishing

438	Chapter 2: Baseline Information	Additional Baseline Water Quality data for breach consequence analysis	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Jun 02, 2022	1	New	Information Requirement	No	The Application must include additional baseline water quality data to allow evaluation of the impacts of a tailings breach (or unforeseen release of mine water) should that unfortunate scenario occur. This includes additional baseline data required for the Nechako Reservoir. (Source Comment ID#5)	Baseline data has been collected at the baseline water quality station WQ30 (now CC-40 in the Aquatic Effects Monitoring Program). The station was intended to represent a suitable proxy for water quality in Nechako Reservoir (based on the minimal dilution of creek inflows) and evaluation of potential mine related effects. To confirm this inference, BW Gold has proposed to collect baseline data in 2022 at two locations within the Nechako Reservoir (Main Basin and Embayment Constriction). BW Gold has also accessed a lengthy record of water quality data from other areas of the reservoir.		CSFN	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
438	Chapter 2: Baseline Information	Additional Baseline Water Quality data for breach consequence analysis	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Aug 11, 2022	2	Follow Up	Recommendation	Yes	Thank you for providing an update on the additional data being collected in 2022 and the availability of additional data on the Nechako Reservoir. Will these data be provided in an addendum to the baseline water quality report? Alternatively, a baseline water quality memorandum for the Nechako Reservoir could be developed as a permit condition. (Source Comment ID#5)	The Nechako Reservoir 2022 monitoring results will be provided in a memorandum in early 2023. BW Gold would be pleased to provide monitoring results periodically to the CSFNs following QA/QC of the data.		CSFN	ERM		Tonia	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
439	Chapter 2: Baseline Information	Effects on Water Quality	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Jun 02, 2022	1	New	Recommendation	No	In Section 2.7.1 (Surface Water Quality), the authors state "the baseline surface water quality program assessed watercourses that could potentially be affected by the Project: Davidson Creek, Chedakuz Creek, Tatelkuz Lake, Creek 661, and Creek 705". Further in this chapter, (i.e.., Section 2.7.1.1 on Baseline Data Sources), the authors describe monitoring "a location downstream where no further effects on water quality from the Project are predicted." Based on information provided in the Application, it is presumed that the station referred to in 2.7.1.1 is WQ30 on Chedakuz Creek; however, the water quality model results show an influence of the Project at this location, defined as a change from baseline condition. How are "effects on water quality" defined? Recommendation: Please describe in the Application how effects on water quality are to be interpreted in the context of this Application. If it is not defined by a change from baseline condition, please describe the expected spatial scope of influence (i.e.., change from baseline) of the Project and include how the Project may influence waterbodies classified under the Yinka Dene 'Uza'hné Surface Water Management Policy. (Source Comment ID#6)	In the Application, Project-related parameters of potential concern (POPC) and parameters of concern (POC) were identified based on screening against BC or CCME water quality guidelines (WQGs). In general, Project-related changes relative to background conditions were not specifically evaluated, except for parameters that had predicted concentrations that were higher than WQGs (see Section 5.4.8.1 [Screening Approach] in Chapter 5; Section 4.1 of Appendix 5-D [Water Quality Model Report]; and Section 2.5 of Appendix 5-I [Conceptual Site Model]). In addition to screening to identify POCs or POPCs based on WQGs, water quality predictions against Class 2 YDWL standards were also provided for Chedakuz Creek at node WQ13 (see Section 4.3.4.2 of Appendix 5-D [Surface Water Quality Model Technical Report] or Section 5 of Appendix 2-K [2011 to 2020 Surface Water Quality Baseline Report]). The Yinka Dene 'Uza'hné Surface Water Guide to Surface Water Quality Standards (Nadleh Whut'en and Stellat'en 2016a) provides methods for the derivation of water quality standards for each of the classified water categories. Baseline water quality sampling has been completed at a number of potential attainment sites on Davidson Creek and Chedakuz Creek in recent years (including 2019 to 2021) to meet the Yinka Dene Water Law sampling frequency (see Appendix 2-K, 2011 to 2020 Baseline Water Quality Report). The implementation of the YDWL is under discussion with the CSFNs.		CSFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
440	Chapter 2: Baseline Information	Monitoring Location Figures	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Jun 02, 2022	1	New	Recommendation	No	Table 2.7.1 provides the list of surface water quality monitoring locations and rationale for inclusion. The associated figure (i.e.., Figure 2.7.1), however, does not include all of the monitoring locations (e.g., WQ29 and WQ30). Recommendation: Please include an updated figure or additional map (e.g., large scale inset) to show Chedakuz Creek and the associated monitoring locations. (Source Comment ID#7)	Figure 2.7.1 in Chapter 2 is missing the inset that shows several of the water quality monitoring locations that are further away from the mine site. Chapter 2 will not be updated or reissued, therefore refer to Figure 3.1-1 in Appendix 2-K [2011 to 2020 Baseline Water Quality Report] that shows the same figure with the inset (showing sites WQ29, WQ230, WQ17, WQ18) provided.		CSFN	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
441	Chapter 3: Mine Plan	Care and Maintenance Mitigations and Modelling	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	The Application must include a detailed description of how the risks associated with a potential period of Care and Maintenance (C&M) following re-start of mine operations would be effectively mitigated including ongoing water management ARD onset, water levels in the TSF, beach maintenance and TSF safety. The Application must conform to the requirements of the EA Condition on Care and Maintenance (Condition 11) and Condition 33 as well. Details of Blackwater Gold's C&M modelling scenario were provided to CSFN on February 21, 2022 and discussed with CSFN. CSFN provided a memo to Artemis on March 17, 2022 containing key comments on the proposed modelling scenario. On April 11, 2022, the Major Mines Office (MMO) provided C&M Information Requirements from Lowell Constable (Major Mines Permitting Office Executive Director & Deputy Chief Inspector). In the memo, MMO detailed additional Information Requirements (IRs) for inclusion in the Major Works Application. These Information Requirements are in addition to those already outlined in Section 4.9 of the JAIR. MMO shared CSFN's expectation that the requirements of EAC Condition 33 be incorporated into all aspects of the Application. Recommendation: Please refer to the letter from MMO, dated April 11, 2022, containing additional C&M Information Requirements and ensure all IRs are fully addressed in the Application. (Source Comment ID#8)	A C&M Plan has been developed by BW Gold, as required by Condition 11 of EAC M19-01, to meet the conditions of the EAC. By way of letter dated February 18, 2022, EAO communicated to BW Gold that the Condition 11 plan is to be revised in consultation with required parties, including the CSFNs, and resubmitted 60 days following the start of construction. BW Gold is planning to submit the outcomes of C&M modelling in the form of an updated Cond. 11 C&M Plan, supported by technical memos from Lorax and KP and a completed ITT, no later than July 31, 2022. It is noted that BW Gold has committed to voluntary C&M Water Balance and Water Quality modelling (above and beyond the EAC requirements) at CSFN's request during a technical meeting between BW Gold and CSFN (Jan 19th, 2022). The voluntary water modelling was subsequently co-presented by CSFN and BW Gold at the Jan 20, 2022 EMC meeting. BW Gold also communicated this modeling initiative to EMLI. EMLI followed up with a letter to BW Gold on April 11th, 2022, outlining the overlap between the EAC Cond. 11 requirements and what EMLI would be requiring for the major works application. EMLI stipulated that MMO will require that the C&M Plan, which addresses all the information requirements, to be provided the later of either the end of Round 2 review or June 30, 2022. BW Gold is in the process of balancing completing the modelling exercise and updating the plan alongside responding to Round 1 MRC comments, with a view to developing an updated plan that reflects the outcomes of Round 1 discussions. BW Gold has already achieved re-submission of the C&M plan to all required parties by the EAC on May 21st ahead of a date in the DSP (v4) of June 30th. BW Gold will also incorporate any required edits into EAC Plan 33 in accordance with the most recent approved version of the DSP. However, Plan 33 is not part of the MW's application, therefore the application is not required to address EAC Condition 33.		CSFN	BWG	BWG	Travis	TD	Ready for Submission	TD, 13-Jun-22	Ready for Publishing
441	Chapter 3: Mine Plan	Care and Maintenance Mitigations and Modelling	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Acknowledged, I look forward to seeing the outcomes of the updated C&M modeling work and discussing changes to the C&M plan. Comment remains open until an updated C&M plan has been provided by Artemis' team. (Source Comment ID#8)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022.		CSFN	BWG	BWG	Travis	TD	Ready for Submission	TD: Aug 23	Ready for Publishing
442	Chapter 3: Mine Plan	Inadequate C&M Planning	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #9 in the source doc for additional context] Recommendation: Please ensure the plan for C&M fully addresses the requirements set out by EAC Conditions 11 and 33. (Source Comment ID#9)	Refer to response to comment #441.		CSFN	BWG		TD	TD	Ready for Submission	TD, 13-Jun-22	Ready for Publishing
442	Chapter 3: Mine Plan	Inadequate C&M Planning	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#9)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022.		CSFN	BWG		TD	TD	Ready for Submission	TD, 23-Aug-23	Ready for Publishing

443	Chapter 3: Mine Plan	ARD Prevention Requirement in Condition 33	CSFN	Knight Piésold Ltd. and Lorax Environmental Service Ltd.	Jun 02, 2022	1	New	Recommendation	No	Tailings for the project are expected to be potentially acid generating (PAG). A key mitigation for the prevention of Acid Rock Drainage (ARD) is covering old tailings with fresh tailings before the onset of ARD. During periods of C&M, fresh tailings will not be generated so covering old tailings with fresh tailings will not be possible. This is problematic for ARD prevention as the old tailings will remain uncovered and Acid Rock Drainage (ARD) is expected to be generated. No plan has been proposed to prevent ARD generation during C&M periods. ARD generation is prohibited by EAC Condition 33. The plan for C&M in the Application must provide mitigation strategies for ARD prevention before the onset of ARD for the tailings beaches. Possible options for ARD prevention include : a)Deposition of overburden material on the tailings beach (inert material) and flooding of PAG tailings to prevent ARD (see Ascot permit requirements in Nov 2021 MA permit) b)Flooding of PAG tailings beaches and geotechnical stability assessment showing adequate safety factors are met c)Design of tailings beaches during operations that are NAG material (current understanding is that for this site this is not feasible due to limitations with desulfurization effectiveness (pers com Lorax, John Dockery) d)Ongoing "wetting" of tailings beaches with sprinklers (seems unlikely to be practical and feasible) Recommendation: Further work is required to determine the plan for the prevention of ARD during periods of C&M. This is an essential component of the Application that is lacking. (Source Comment ID#10)	Refer to response to comment #441.		CSFN	KP	Lorax	Greg/John	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
443	Chapter 3: Mine Plan	ARD Prevention Requirement in Condition 33	CSFN - P. Littlejohn	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#10)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022.		CSFN	BWG		Travis	TD	Ready for Submission	TD: Aug 23	Ready for Publishing
443	Chapter 3: Mine Plan	ARD Prevention Requirement in Condition 33	CSFN - F.Mohamm, P. Littlejohn	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Considering the results of the additional modelling work, CSFN support limiting the quantity of water stored in the TSF to reduce geotechnical risks and facilitate speedy return to operations. This, however, increases geochemical risks that can potentially lead to negative environmental effects due to the inherent uncertainty of modelling. This risk is further exacerbated by the assumptions made for derivation of the acidic tailings source term in the current C&M modelling work. The tailings source term is estimated based on the PAG rock properties and neglects the significant difference in particle size between tailings and PAG rock. This results in a gross underestimation of the contaminants loading and must be addressed as soon as possible and no later than in the next iteration of the model. Moreover, the quantity of soil available for site reclamation is finite. As such, it is recommended that BW Gold plan for and use alternative sources of inert materials to cover the exposed tailings if required. This could be inert NAG or overburden material. Tables 6.4-2 and 6.5-1 of the C&M Plan refer to draining the tailings distribution system but maintaining operational capacity in the case that a NAG slurry cover is determined to form part of the C&M cover described for scenario 2. However, the use of	Chapter 4 - section 4.2.2 Landform design and control of the application states that *'The closure strategy for the PAG tailings includes processing NAG waste rock and OVB to create a slurry made of NAG waste rock and OVB to cover the PAG tailings. The NAG waste rock and OVB slurried cover will minimize ARD/ML from the underlying PAG tailings in the long-term.'* Depending on the timing of a potential C&M period within the timing of the overall LoM and the volumes of soil available for use at the time the site entered a C&M period, a risk assessment could be carried out prior to placing a cover to determine the best path forward, whether it be soil placement or a NAG slurry. It is important to keep in mind that the water quality results from a 'no cover' scenario vs. a soil cover scenario in a C&M period were very similar based on the outcomes of the C&M water quality modelling and as such there is no potential risk from a timing perspective to carry out an informed risk assessment before making a decision on placement of a cover. The C&M plan will be updated at its next annual interval to include information related to the potential use of NAG slurry as a cover alternative to soil including discussion on any potential impacts from a NAG slurry cover to any other remediation and reclamation plans and activities. In regards to the recommended permit condition - BW Gold has already		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
444	Chapter 3: Mine Plan	Tailings Beach QPO	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must describe how the TSF water management plan will ensure that the assumptions for the TSF design allow for tailings beach presence for all project phases including operations, C&M and closure. QPOs for tailings beaches must be developed that are practical to implement and monitor. (Source Comment ID#11)	Monitoring and operational requirements related to the TSF are summarized in Section 9 of Appendix 3-K of the Application. Preliminary QPOs related to the initial construction and operations of TSF C with the goal of managing freeboard, facility capacity, and embankment stability were developed. Final QPOs will be established after construction and summarized in the Operations, Maintenance and Surveillance (OMS) Manual. QPOs are selected to enable a high-level comparative assessment with the performance objectives for the TSF and must be reviewed annually and revised as required to remain current during on-going construction of the TSF.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
444	Chapter 3: Mine Plan	Tailings Beach QPO	CSFN- L. Boxill	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	At a minimum, beach above water width of 30 m should be established as a QPO when tailings are deposited in both TSF-C and TSF-D facilities. This aligns with the requirements of EAC Condition 33. (Source Comment ID#11)	As noted in the R1 response, monitoring and operational requirements related to the TSF are summarized in Section 9 of Appendix 3-K of the Application. QPOs are selected to enable a high-level comparative assessment with the performance objectives for the TSF and must be reviewed annually and revised as required to remain current during on-going construction of the TSF. QPOs will be summarized in the Operations, Maintenance and Surveillance (OMS) Manual, per the Code. At this time, it is premature to presume such a prescriptive minimum QPO is appropriate for the proposed TSF. The stated goal of EAC Condition 33 (Mine Waste and Water Management Plan) is to 'manage mine waste and water in a manner that is protective of the receiving environment'. BWG is unclear how this proposed QPO for the TSF 'aligns' with EAC Condtion 33.		CSFN	KP				Ready for Submission	AT, Aug 31	Ready for Publishing

444	Chapter 3: Mine Plan	Tailings Beach QPO	CSFN- L. Boxill	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommendation	Yes	While it is well understood that an OMS will be developed and periodically updated to govern operation of site TSFs, clear articulation of how above water beaches will be maintained, and all other measures taken to maintain embankment dam safety, are consistent with tailings management best practice. Absence of above water tailings beaches deviates from best tailings management best practice and introduces the potential for prolonged elevated dam safety risk, especially if its maintenance is not understood to be an operational requirement. Recommendation: While it is understood and known that portions of the above water beach may become periodically inundated depending on which tailings deposition spigots are active at any given period of time, the OMS must clearly specify how the supernatant pond will be managed to reduce the potential for dam failure and avoid triggering various modes of dam failure. As such, recommendations for this inclusion in the OMS Manual is initially targeted at operational commitments to monitor and maintain dam safety, recognizing that failure to manage water in a TSF can result in elevated risks of certain modes of dam failure. Secondarily, location of the supernatant pond immediately adjacent to the upstream embankment shortens the seepage pathway and elevates the driving head for seepage that will report downstream of the TSF. (Source Comment ID#11)	As stated in the response to this comment in Round 1, monitoring and operational requirements related to the TSF are summarized in Section 9 of Appendix 3-K of the Application. Preliminary QPOs Trigger-Action Response Plans (TARPs) related to the initial construction and operations of TSF C with the goal of managing freeboard, facility capacity, and embankment stability were developed and presented in Section 9.3 and Appendix H1 of the report. Additionally, Section 9.4 of the report contains maintenance and surveillance requirements for the TSF to monitor and maintain dam safety. It is important to note that initial tailings discharge into TSF C in early operations will be from the ground on the west side of the facility (i.e. not from the embankment crest) as described in Section 5.2.3 of Appendix 3-K. The presence of an above water tailings beach during the early operations period until about Year 7 is basically inconsequential due to the TSF filling plan. The PAG/NAG3 waste rock dump located immediately upstream of Main Dam C between Years 1 and 6 provides initial separation of the supernatant pond from the embankment. The importance of the relative elevation and extents of this dump surface compared to the TSF supernatant pond is clearly articulated in the report, and incorporated into the Preliminary QPOs with associated TARPs presented in the report. A tailings beach length QPO may be incorporated in the OMS Manual at an appropriate time in the future, such as when tailings discharge from the Main Dam C embankment crest commences in approximately Year 7.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
445	Chapter 3: Mine Plan	General Comments Related to Latest Versions of Major Works Application	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	Yes	Improvement of the overall completeness of Chapter 3 and Chapter 4 of the Application (compared to earlier versions reviewed in October 2021) is noted. The format supports more comprehensive review of details related to the design, operation, and closure of tailings storage facilities (TSFs), mine waste dumps, the low-grade ore stockpile, topsoil stockpiles, and water management structures. Table 3.3-10 (Infrastructure Overview) and Table 3.3-11 (Summary of Impoundments) provide good compilations of key design configurations and construction schedule for mine waste and water management infrastructure. Unfortunately, tables summarizing material properties, design criteria and results of seepage, stability, liquefaction, and settlement analyses completed for TSFs and water management structures were not included in the body of the report as was done for the sections describing waste rock stockpiles.	Thank you for the recommendation. We will consider these comments and stated preferences in the future; however, no changes are being made to the way the information has been presented.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
446	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #13 in the source doc for additional context] Recommendation: It would be more accurate to acknowledge that only a screening level qualitative assessment of liquefaction potential of samples from the various geologic units encountered during site 2019 and 2020 site investigation programs was completed. (Source Comment ID#13)	Thank you for the recommendation. We believe the methodology is adequately described in the report.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
446	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	Clearly indicate what specific additional liquefaction analyses will be completed for site materials that will be collected during the site investigation program outlined in "R1_EMLI Geotech Comment ID 242.pdf. Regarding liquefaction, "R1_EMLI Geotech Comment IDs 319 - 321" notes "uncertainty has been identified that must be addressed through supplemental investigation, testing, and analysis." It further states, "where data exists, the liquefaction assessment indicates that the GLUs are not likely to be susceptible to liquefaction. The understanding of the nature and extent of the GLU along the MDD alignment is limited by the available drilling information and in-situ testing data. Additional work, similar to the investigations completed between 2019 and 2021 at Main Dam C is required prior to preparing the Issued-for-Construction (IFC) design of MDD and the start of construction in approximately Year 5." Recommendation: Please provide a clear explanation of what specific engineering analyses will be completed and what data is to be collected to provide greater insight into the liquefaction potential of the various GLU materials encountered at the site. (Source Comment ID#13)	The reviewer is encouraged to consider the information presented in Appendix C3 (Section C3.6) of Appendix 3-J (TSF Stage 1 Detailed Design Report) of the Application for additional information on the liquefaction assessment completed for Stages 1 and 2 of Main Dam C. In addition to the SCPT based assessments of the glaciolacustrine and completely weathered bedrock materials presented in Appendix 3-Z and described in the reviewers comments, liquefaction susceptibility analyses were carried out using several methods based on soil index testing results, downhole seismic testing shear wave velocity data, and standard penetration testing data collected at the site. A similar approach was taken for the other structures; however, analogue data based on material type was sometimes used if site specific in-situ testing was not available at the structure of interest. The site investigations recommendations include consideration for additional in-situ testing, particularly where analogue data was more heavily relied upon (e.g. Main Dam D). The referenced response, "R1_EMLI Geotech Comment ID 242.pdf", describes the targeted sampling and supplemental specialized soil laboratory testing plans for the upcoming site investigation program that will be used to further enhance understanding of material behavior of the foundation materials in the TSF and stockpiles areas. The laboratory testing program will incorporate additional index testing, odometer testing to further investigate reconsolidation pressures and over consolidation ratio, drained/undrained triaxial and direct simple shear testing to further evaluate material strength properties using remolded and low-disturbance samples collected during the program. Material strength characterization, steady-state seepage and stability modelling, and assessments of the potential for liquefaction will be updated progressively as new information becomes available. These engineering analyses will inform preparation of the issued for the construction designs of the various stages of the TSF.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
446	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN (Lois Boxill)	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: We recommend a comprehensive assessment of foundation conditions, and clear description of site investigation, laboratory testing, and analyses that will be completed to address all "uncertainties" associated with foundation conditions, and GLUs in particular, as a permit condition that must be satisfied prior to granting regulatory approval of construction of all impoundment embankments associated with the Project. We further recommend independent 3rd party review of all design reports and their supporting appendices be included as a permit condition that must be satisfied prior to granting regulatory approval for the construction of any impoundment embankments at the Project site. (Source Comment ID#13)	BW Gold acknowledges the comment and disagrees with the suggested permit condition related to assessment of the foundation conditions as these details were already provided in the Application and supporting documentation. A comprehensive assessment of the foundation conditions is presented in the Dam Site Characterization Report in Appendix 3-L of the Application. A description of the upcoming field programs to further enhance the characterization of the site was provided in response to the Round 2 comment above. Detailed planning and objectives for later stages of investigation will be further developed based on the findings and success of the upcoming investigations, as is standard practice. EMLI has indicated in comment IDs 288 and 2079 that there is a potential permit condition related to independent review and BW Gold has acknowledged that potential permit condition.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
446	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN (Lois Boxill)	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	No	The key elements of the permit condition recommended for comment ID 446 are consistent with those that would also need to be addressed under the Permit Conditions anticipated by EMLI in comment IDs 288 and 2079 which BW Gold has acknowledged. Independent review and any subsequent reporting triggered by the permit conditions anticipated by EMLI in comment IDs 288 and 2079 will be tracked and reviewed to confirm the extent to which the concerns prompting our recommended permit condition for comment ID 446 have been addressed. Consequently, the potential permit condition recommended for comment ID 446 is considered subsumed by the Potential Permit Conditions anticipated by EMLI in comment IDs 288 and 2079 which BW Gold has acknowledged. Recommended Permit Condition: to be addressed under Permit Condition anticipated in Comment IDs 288 and 2079	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP						
447	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #13 in the source doc for additional context] Recommendation: Samples of material that were identified as contractive should be obtained either from past or future geotechnical site investigation programs at the site, especially where they occur within the foundation limits of dam embankments. These materials (primarily completely weathered bedrock (CWB) and glaciolacustrine (GLU) deposits, should be submitted for additional laboratory geotechnical testing to further characterize and evaluate their engineering properties when cyclic triaxial and cyclic simple direct shear forces are applied. (Source Comment ID#14)	Agreed. Additional laboratory testing is incorporated in the on-going site investigation plans for the project. See response to Comment ID #449 for additional details.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing

447	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	The detail provided in "R1_EMLI Geotech Comment ID 242.pdf" regarding the proposed scope and schedule for completing additional site characterization and laboratory testing of collected samples is appreciated. However, neither this document nor "R1_EMLI Geotech Comment IDs 319-321.pdf" mention specific analyses that will be completed using engineering characterization data from materials samples to be collected prior to finalizing embankment design sections for construction, especially for areas where samples have not been collected. Please ensure this information is provided. (Source Comment ID#14)	The engineering analyses supporting the issued for construction designs of the various stages of the TSF will generally include updated characterization of the foundation conditions (if required), steady-state seepage analyses to estimate the phreatic surface elevation and evaluate flow paths through the dam and foundations, limit equilibrium stability analyses to verify target factors of safety are being met, liquefaction susceptibility assessments, and embankment deformation assessments and crest settlement estimates using simplified methods at a minimum. Dynamic deformation modelling may be performed, if required to demonstrate seismic performance objectives are being met.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
447	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN (Lois Boxill)	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Recommendation is consistent with that made for the R3 response in Source Comment 13. (Source Comment ID#14)	See response to Comment ID 446, which relates to the referenced Source Comment 13.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
447	Chapter 3: Mine Plan	Quantitative Evaluation of Static and Seismic Liquefaction Potential	CSFN (Lois Boxill)	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	Yes	The key elements of the permit condition recommended for comment ID 447 are consistent with those that would also need to be addressed under the Permit Conditions anticipated by EMLI in comment IDs 288 and 2079 which BW Gold has acknowledged. Follow up to and any reporting triggered by the permit conditions anticipated by EMLI in comment IDs 288 and 2079 will be tracked and reviewed to confirm the extent to which the concerns prompting our recommended permit condition for comment ID 447 have been addressed. Consequently, the potential permit condition recommended for comment ID 447 is considered subsumed by the Potential Permit Conditions anticipated by EMLI in comment IDs 288 and 2079 which BW Gold has acknowledged. Recommended Permit Condition: to be addressed under Permit Condition anticipated in Comment IDs 288 and 2079	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP					
448	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #15 in the source doc for additional context] Recommendation: Provide a table summarizing the design criteria, material parameters, and results from stability and seepage analyses resulting from analysis of all TSF embankments. Provision of this summary allows for quick confirmation that all applicable factors of safety have been met for the various modes of analysis completed. (Source Comment ID#16)	Thank you for the recommendation. The results should be reviewed along with the context provided in the appropriate sections of the report. Calculated factors of safety are compared with minimum targets and discussion is provided. An overall summary table will not be produced as it creates greater possibility for discrepancies and does not include the appropriate context and discussion.		CSFN	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
448	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	The additional discussion about stability analyses for Main Dam D provided in "R1_EMLI Geotech Comment IDs 319-321.pdf" has been reviewed and is appreciated. Recommendation: Please indicate which drill holes were used to develop the design cross sections (including foundation materials beneath Main Dam C and Main Dam D) that were analyzed and presented in the Application to evaluate embankment stability under the range of operations conditions evaluated. Explain the rationale that was applied to determine cross-section stratigraphy in areas where test hole data does not exist. Additionally, while actual site conditions encountered will always require site investigation programs to be adjusted, it would be extremely helpful to provide a plan drawing showing, at a minimum, the locations where drill holes will be targeted to improve the material characterization (Source Comment ID#16)	Overall summaries of the foundation conditions at each dam site are provided in Appendix 3-L (Dam Site Characterization Report) of the Application. A summary of the information, including drillholes, test pits, and other data, used to the develop the design cross sections for Main Dam C is provided in Appendix C3 (Figure C3.1 and Table C3.1) of Appendix 3-J (TSF Stage 1 Detailed Design Report) of the Application. The drillholes used to develop the design cross section for Main Dam D are shown on Figure 6.1 of Appendix 3-Z; the drillholes used to develop the section included several geotechnical drillholes along the alignment (GT13-40, GT12-02, GT12-16), geotechnical drillholes within the TSF basin (GT12-15, GT12-31, GT12-41, GT20-03, GT20-04, GT21-03 (D), GT21-03B (S), GT21-05), several nearby condemnation drillholes (RCH008, RCH009, RCH010, and RCH031), various test pits completed in the area, and the findings of the surficial geology and landform mapping presented in Appendix C1 of Appendix 3-L of the Application. The rationale applied to develop the cross-section stratigraphy (including where test hole data was unavailable) was generally as follows: 1. The deglaciation model map along with the reference maps and terrain and landform maps provided in Appendix A1 and Appendix C1, respectively, of Appendix 3-L fill in the site geology data gaps where drillhole data does not exist. The maps were developed through glacial landform mapping, extrapolation of site investigation data, and reconnaissance terrain mapping, respectively, and provide a high level representation of the site geology that can reasonably be used in the absence of specific data. 2. Data from drillholes completed in the vicinity of the analysis cross section were used to refine the high level representation provided by deglaciation model and terrain and landform maps. The refinement was generally completed as follows: (a) The bedrock surface along the cross section was modelled as a subdued reflection of surface topography based on the depth of bedrock contacts. Where drillholes intercept bedrock across the cross section, the surface elevation modelled was a spatial average of the contacts. (b) Highly and completely weathered bedrock contacts were modelled at spatially averaged thickness above the bedrock surface along the cross section. (c) The glaciolacustrine units along the cross section were modelled at the top elevation and thickness at which they were intercepted in the drillholes along the cross section. Where drillholes intercepted glaciolacustrine units near the cross section, the glaciolacustrine unit top of elevation and thickness was modelled as a spatial average of the contacts and extended to the limits indicated by Figure A1.9 and described in the structure specific sub-sections in Section 7 of Appendix 3-L or to the intersection of the		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing

448	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Embankment conditions and design sections analyzed for stability (static, dynamic, peak and residual) and seepage analyses of TSFs shall be explicitly tied to site investigation data stemming from test holes that are clearly located within currently anticipated embankment and impoundment footprint limits. Permit Condition Recommendation to EMLI: We recommend independent 3rd party review of all design reports and their supporting appendices be included as a permit condition that must be satisfied prior to granting regulatory approval for the construction of any impoundment embankments at the project site. (Source Comment ID#16)	The previous Round 2 response provides the rationale for how embankment conditions and design sections were tied to the site investigation data. We note that the reviewer has not commented on any specific aspect of the summary/rationale that was provided in response to the previous iteration of this comment, and the reviewer has not stated any inferred concerns with the rationale supporting their recommendation of independent review. However, we further note that EMLI has indicated in comment IDs 288 and 2079 that there is a potential permit condition related to independent review of the TSF, and BW Gold has acknowledged that potential permit condition.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
448	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	Yes	The key elements of the permit condition recommended for comment ID 448 are consistent with those that would also need to be addressed under the Permit Conditions anticipated by EMLI in comment IDs 288 and 2079 which BW Gold has acknowledged. Follow-up to and any reporting triggered by the permit conditions anticipated by EMLI in comment IDs 288 and 2079 will be tracked and reviewed to confirm the extent to which the concerns prompting our recommended permit condition for comment ID 448 have been addressed. Consequently, the potential permit condition recommended for comment ID 448 is considered subsumed by the Potential Permit Conditions anticipated by EMLI in comment IDs 288 and 2079 which BW Gold has acknowledged. Recommended Permit Condition: to be addressed under Permit Condition anticipated in Comment IDs 288 and 2079	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP						
449	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #15 in the source doc for additional context] Recommendation: Findings from stability analyses underscore the importance of fully investigating the location and extent of GLU materials in the foundations of any of the dams (tailings, fresh water, or seepage), located at the site. Plans with associated schedules to complete this assessment should be clearly specified. (Source Comment ID#17)	A site investigation plan for the next five years was developed and can be shared to provide further clarification of the site investigation targets and schedule during preproduction (Years -2 and -1) and the first three years of mine operations (Years 1 to 3). Please see the attachment entitled "R1_EMLI Geotech Comment ID 242.pdf" which was prepared in response to a similar comment from EMLI and inconsideration of this comment from CSFN.		CSFN	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
449	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	The detail provided in "R1_EMLI Geotech Comment ID 242.pdf" regarding the proposed scope and schedule for completing additional site characterization and laboratory testing of collected samples, especially to enhance characterization of GLU materials, is appreciated. CSFN looks forward to seeing how improved characterization of GLU materials may impact proposed design sections for embankment dams. (Source Comment ID#17)	BW Gold acknowledges this comment.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
449	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Recommendation is consistent with that made for the R3 response in Comment 13. (Source Comment ID#17)	See response to Comment ID 446, which relates to the referenced Source Comment 13; however, we note that it is not clear why this comment has not been resolved as the reviewer and respondent have agreed that further investigation to enhance characterization of the GLU materials would be beneficial.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
449	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	Yes	It is appreciated that the Respondent clearly notes that "the reviewer and respondent have agreed that further investigation to enhance characterization of the GLU materials would be beneficial." It is also anticipated that any adjustment to embankment locations and/or alignment resulting from additional site investigations and analyses completed to support detail design of all embankments for the project will address and reflect as necessary, any findings associated with enhanced characterization of GLU materials. Further, it is anticipated that these findings and any related analyses will be included within the scope of the Independent Technical Reviews included in the permit condition anticipated by EMLI in comment IDs 288 and 2079 Recommended Permit Condition: to be addressed under Permit Condition anticipated in Comment IDs 288 and 2079	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP						
450	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #15 in the source doc for additional context] Recommendation: Please provide an indication of the minimum buttress configuration that would be required to improve the FoS under post-seismic loading for the indicated Dams at the construction stages indicated in Table 1 included in this technical memo. (Source Comment ID#18)	Thank you for the recommendation. Additional clarifications related to the Main Dam D stability assessment are provided in the attachment entitled "R1_EMLI Geotech Comment IDs 319-321.pdf". The attachment provides additional context related to the analyses that were performed, significance of the results, and path forward during progressive construction of the TSF.		CSFN	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
450	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	The information provided in "R1_EMLI Geotech Comment IDs 319-321.pdf" has been reviewed and is appreciated. CSFN looks forward to seeing how improved characterization of GLU materials may impact proposed design sections for embankment dams. (Source Comment ID#18)	BW Gold acknowledges this comment.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
450	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Recommendation is consistent with that made for the R3 response in Comment 13. (Source Comment ID#18)	See response to Comment ID 446, which relates to the referenced Source Comment 13; however, we note that it is not clear why this comment has not been resolved as the reviewer and respondent have agreed that further investigation to enhance characterization of the GLU materials would be beneficial prior to construction of Main Dam D.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
450	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	Yes	It is appreciated that the Respondent clearly notes that "the reviewer and respondent have agreed that further investigation to enhance characterization of the GLU materials would be beneficial." It is also anticipated that any adjustment to embankment locations and/or alignment resulting from additional site investigations and analyses completed to support detail design of all embankments for the project will address and reflect as necessary, any findings associated with enhanced characterization of GLU materials. Further, it is anticipated that these findings and any related analyses will be included within the scope of the Independent Technical Reviews included in the permit condition anticipated by EMLI in comment IDs 288 and 2079 Recommended Permit Condition: to be addressed under Permit Condition anticipated in Comment IDs	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP						

451	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #15 in the source doc for additional context] Recommendation: This reviewer concurs with the findings made by the stability analysis report authors that additional extensive geotechnical site investigations are required to further assess the nature and extent of GLU materials located in the foundation of the embankments for Main Dam C and Main Dam D. (Source Comment ID#19)	Thank you for this comment. Please refer to the response to Comment ID #449 for upcoming site investigation plans and further progressive characterization of the glaciolacustrine materials present in the foundations of the proposed embankments.		CSFN	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
451	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	The information provided in "R1_EMLI Geotech Comment IDs 319-321.pdf" has been reviewed and is appreciated. CSFN looks forward to seeing how improved characterization of GLU materials may impact proposed design sections for embankment dams. (Source Comment ID#19)	BW Gold acknowledges this comment.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
451	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Recommendation is consistent with that made for the R3 response in Comment 13. (Source Comment ID#19)	See response to Comment ID 446, which relates to the referenced Source Comment 13.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
451	Chapter 3: Mine Plan	TSF and Water Control Dam Stability Analyses	CSFN (Lois Boxill)	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	Yes	The Respondent's earlier acknowledgment of our interest in seeing how improved characterization of GLU materials may impact proposed design sections for embankment dams is appreciated. It is also noted that the Respondent clearly notes in response to earlier comments associated with GLU characterization that "the reviewer and respondent have agreed that further investigation to enhance characterization of the GLU materials would be beneficial." It is also anticipated that any adjustment to embankment locations and/or alignment resulting from additional site investigations and analyses completed to support detail design of all embankments for the project will address and reflect as necessary, any findings associated with enhanced characterization of GLU materials. Further, it is anticipated that these findings and any related analyses will be included within the scope of the Independent Technical Reviews included in the permit condition anticipated by EMLI in comment IDs 288 and 2079 Recommended Permit Condition: to be addressed under Permit Condition anticipated in Comment IDs 288 and 2079	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP						
452	Chapter 3: Mine Plan	Seismic Deformation Estimates	CSFN	Joseph Cristobal, P.Eng.; Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 5 of Appendix 3-Z provides descriptions of the seismic deformation estimates that were determined for the various dams analyzed using the methods provided in Bray (2007) and Swaisgood (2003). Reading the various paragraphs where settlement data are provided, it appears that in most cases, embankment dam crests settled less than 15 cm. This level of settlement is considered reasonable for embankment dams of the size of the structures proposed. Recommendation: Include a summary of the settlement analysis completed (i.e.., method used) and the results in the main body of the Application to enhance and expedite thorough assessment of	Thank you for the recommendation. We will consider these comments and stated preferences in the future; however, no changes are being made to the way the information has been presented.		CSFN	KP		Dan/Joseph	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
453	Chapter 3: Mine Plan	TSF Operations, Management, and Surveillance	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 3.5.3.9 confirmed that placement of tailings in TSF-D does not commence until Year 21. As such, TSF-D will serve as a PAG storage location for its first 20 years of operation, with these materials only becoming flooded/inundated by tailings between Year 21 and Year 23. Conversely, it is noted that PAG/NAG waste rock will be placed upstream of Main Dam C during its first six years of operations along. Additionally, this facility has been designed to provide tailings storage for the first 21 years of mine operation as well as "provide a continuous source of process water to the mill operations." Figure 3.3-11 which provides the General Arrangement of Blackwater Mine during Year 8 of operations, shows a significant tailings beach upstream of Main Dam C with the TSF C pond located further	Monitoring and operational requirements related to the TSF are summarized in Section 9 of Appendix 3-K of the Application. These preliminary operations and monitoring requirements will be incorporated into Operations, Maintenance and Surveillance (OMS) Manual following construction of TSF C along with other pertinent content. The OMS Manual will be reviewed annually and updated as required during progressive development of the TSF. It will incorporate requirements for TSF D once it is constructed.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
453	Chapter 3: Mine Plan	TSF Operations, Management, and Surveillance	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	When prepared, the OMS for both impoundments will need to explicitly state how PAG is placed upstream of each embankment will be continuously submerged to avoid onset of acidification of stored PAG. (Source Comment ID#21)	BW Gold acknowledges this comment.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
453	Chapter 3: Mine Plan	TSF Operations, Management, and Surveillance	CSFN (Lois Boxill)	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: We recommend independent 3rd party review of the OMS for all impoundment embankments be included as a permit condition that must be satisfied prior to granting regulatory approval for the use of any impoundment embankments at the project site. Specifically, OMSs should be reviewed in conjunction with their associated detailed design report to ensure consistency between the mass balance, incremental stage storage curves and proposed operations for each facility. Specifically, any filling associated with PAG rock inundation or water withdrawals, as described in sections of the EA associated with water that will be treated for sulphate prior to discharge to the environment from TSF-C, should be clearly described in the design reports for TSF-C and TSF-D which should also indicate what measures are included in the design and operation of each TSF to avoid developing potentially adverse operating conditions at either impoundment. The operating conditions that must be maintained and the means by which these conditions will be monitored and adjusted as needed throughout mine life should be clearly noted in the OMS for all site impoundments. (Source Comment ID#21)	BW Gold acknowledges the comment and disagrees that independent review of an OMS Manual is a necessary permit condition because this review requirement is already incorporated in the Code. The OMS Manual will be developed, reviewed, and approved in a manner consistent with requirements of the Health, Safety and Reclamation Code for Mines in British Columbia (the Code) and submitted to the chief inspector prior to operation of the TSF. The OMS Manual will be reviewed regularly by the operator and revised as required during operations. Annual dam safety inspections and periodic dam safety reviews, as required by the Code, already include requirements for regular reviews of the OMS Manual by the Engineer of Record and independent reviewers, respectively.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing

453	Chapter 3: Mine Plan	TSF Operations, Management, and Surveillance	CSFN (Lois Boxill)	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Dec 15, 2022	4	Follow Up	Recommended Permit Condition	Yes	While independent technical reviews of detailed design reports and OMS manuals for TSFs are required under the Code as acknowledged by the Respondent, the proposed recommendation is flagging a need for independent reviewers to examine and assess potential implications and necessary considerations related to placement of PAG upstream of both Main Dam D and Main Dam C (as noted in comment ID 453), and of the potential for any adverse or otherwise undesirable conditions stemming from free water in the pore spaces of placed PAG creating a wetting front equal in depth to the height of placed waste rock (as noted in comment id 444). Additionally, comment ID 453 intends to draw explicit attention to the geotechnical professionals who are typically responsible for preparing and reviewing OMS manuals of the likelihood that the OMS manuals prepared for this project will likely also need to address how TSF operations accommodate removal of water for treatment of sulphate prior to discharge to the environment. Consequently, the recommendations made under comment ID 444 are carried forward here and modified as follows: Recommendation 1a: Independent Technical Review of the detailed design of Main Dam C and Main Dam D that is anticipated to be included as a Permit Condition by EMLI in comment IDs 288 and 2079 should include an assessment of why and how a practice of prolonged/extended storage of water adjacent to the upstream slope of an embankment dam is desirable and/or acceptable, and how any combination of factors that may result in a breach of either embankment will be mitigated or managed during operations. Recommendation 1b: That Independent Technical Review of the detailed design of Main Dam C and Main Dam D include explicit review of proposed operations practices of both TSFs including placement of PAG materials, deposition of tailings, controlling the location and depth of ponded supernatant water, and how operation of TSFs accounts for withdrawals of water for chemical treatment prior to planned release to the environment. Recommendation 2: That the issue of and plan for managing free water (including that stored in large open voids of PAG stored in TSFs) be flagged for additional review and evaluation as part of the Mine Permit and should be completed prior to the start of operating either TSF. Recommended permit condition 1a and 1b to be addressed under Permit Condition anticipated in Comment IDs 288 and 2079 Recommended Permit Condition: Recommended permit conditions 1b and 2 should be clearly specified as related to discussions/topics to be addressed in the OMSs prepared for TSFs for which Main Dam C	Acknowledged. BW Gold looks forward to discussing the proposed language during the permit drafting stage.		CSFN	KP						
454	Chapter 3: Mine Plan	TSF Operations, Management, and Surveillance	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #21 in the source doc for additional context] Recommendation: Different line types should be used to differentiate tailings profiles and placement, from waste rock placement, and co-mingled waste rock and tailings for both TSFs in Figure 3.5-32 and Figure 3.5-33. At a minimum, the stage storage curve shown for each TSF should articulate how each of these facilities will be utilized. (Source Comment ID#22)	Figures showing a longitudinal cross-section through the TSF and additional detailed information in the general vicinity of Main Dam C and Main Dam D were developed that shows the relative placement of waste rock and tailings in TSF C and TSF D. Please see attachment "R1_EMLI Geotech Comment ID 290.pdf" for details.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
455	Chapter 3: Mine Plan	Topsoil Stockpiles and Its Use in TSF Closure and Remediation	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Jun 02, 2022	1	New	Recommendation	No	Section 3.5.7 provides a description of topsoil stockpiles and directs readers to Table 3.5.7-1 which summarizes the storage capacity of each of the seven topsoil stockpiles that will exist at the site during Life of Mine operations. While Figure 3.3-5 through Figure 3.3-15 provide good overviews of the site's general arrangement from year Y-2 (mine construction) through year Y46+ (post closure), it is notable that the only units not labelled on these drawings are topsoil stockpiles. While this may seem trivial, inclusion of the names with the locations of each topsoil stockpile on each of the indicated General Arrangement figures demonstrates the Proponent's awareness that salvaging, stockpiling, and preserving topsoil and reclamation media is a requirement from the outset and throughout all phases of mine life. In addition, while Figure 3.3-15 is entitled "General Arrangement of Blackwater Mine at Post-closure Year 46+, it is notable that the tailings beaches are shown as un-reclaimed and existing in the form of above water tailings. While Section 3.5.7 indicates that placement of topsoil on tailings surfaces may cause fouling of anticipated water treatment, the closure plan description included in Chapter 4 of the Application makes clear that as a bare minimum, 30 cm of Overburden and NAG sand will be placed over the tailings beach. As such, Figure 3.3-15 should indicate that some sort of cover material is placed on the surface on the exposed tailings beaches above water and that tailings beaches will not be present in the post closure phase as a driver for annual dusting challenges. This modification would make the tailing beach surfaces consistent with the information shown in Figure 4.2-1 of Chapter 4 of the Application. Recommendation: Clearly label Topsoil Stockpiles on General Arrangement Figures provided in Chapter 3. (Source Comment ID#23)	The topsoil stockpiles are represented by a pink colour on the figures and indicated in the legend as 'Topsoil Stockpile' on general arrangement figures (beginning with Figure 3.3-5 in Chapter 3). Each of the numbered topsoil stockpile locations are labelled and provided in Figure 3.5-61 of Chapter 3 and in Figure 10.1-1 of the Soil Management Plan (Appendix 9-B). Thank-you for your comment regarding the 'unreclaimed' tailings beaches in Figure 3.3-15. We will consider these comments and stated preferences in the future; however, no updates to Figure 3.3-15 is provided. The Reclamation and Closure Plan will be provided as a future stand-alone plan with Figure 4.2-1 (Reclamation-material Depths for Mine Closure) provided to show the proposed cover material and depth of the Tailing Storage Facility (TSF) beach.		CSFN	ERM		Valerie	AT	Ready for Submission	RT; June 27	Ready for Publishing
456	Chapter 3: Mine Plan	Integration of Reclamation Security Cost in Net Smelter Return (NSR)	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Any LGO stockpile that requires movement of the stockpiled material from the stockpile location to a final reclamation location will have to be considered in the reclamation security cost. BW Gold states that costs associated with the LGO stockpile bonding have been incorporated into the financial cash flow forecasts for the project but are not explicitly included in the calculation of the Net Smelter Return (NSR) value. CSFN are concerned about this omission from an environmental impact perspective. Exclusion of these costs from the NSR value decreases the economic cut-off grade for LGO material on an incomplete basis, disincentivizes the use of alternative LGO stockpile designs, and incentives a larger LGO stockpile than what is truly economically processable. Analysis of LGO stockpile size and options must incorporate the cost of bonding into NSR. Information Request: Please provide updated project economics using NSR values that reflect the cost of bonding. (Source Comment ID#24)	Please see attachment "R1_CSFN_Comment IDs 456, 457, 458, 459, 460.pdf"		CSFN	BWG		Alastair	TD	Ready for Submission	AT; June 28	Ready for Publishing
456	Chapter 3: Mine Plan	Integration of Reclamation Security Cost in Net Smelter Return (NSR)	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	No new information is provided as part of this round of review beyond the previous discussions and correspondences. CSFNs will continue discussion of the LGO bonding cost through trilateral meetings with BW Gold and EMLI, to establish a cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate. (Source Comment ID#24)	The comment is acknowledged.		CSFN	BWG		Ryan	RT	Ready for Submission	RT; aug 24	Ready for Publishing
456	Chapter 3: Mine Plan	Integration of Reclamation Security Cost in Net	CSFN - F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Information Requirement	Yes	The proposed LGO stockpile for the Blackwater project remains a top concern for CSFNs, primarily because of its massive size, immediate onset of acid rock drainage, the requirement to be moved if not processed, and its relatively low grade of gold. Together, these characteristics give the proposed LGO a level of environmental risk that is unprecedented in Canadian mining projects. CSFNs raised concerns with the LGO stockpile during the Environmental Assessment when it was	The comment is acknowledged. BW Gold submitted to EMLI for distribution to the MRC an update to its proposed RLCE on October 13th. The update included the following proposed permit condition as part of its updated RLCE: *Prior to the commencement of stockpiling Low Grade Ore, and prior to each subsequential increment of 10 Mt, the Permittee will cause to be deposited with the* *Minister of Finance, a security in the amount of $22.1 million for rehandling of the*		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing

457	Chapter 3: Mine Plan	LGO Alternative Designs	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Source has suggested several alternative options for LGO siting. BW Gold has so far responded by how alternatives to the option proposed by Artemis are less cost-effective. CSFN are concerned that the evaluation of alternatives is incomplete when the cost of bonding is not incorporated into the overall cost-benefit analysis. This means that a portion of the LGO will appear to be economical to process based on incomplete NSR evaluation but, will not be economical when the cost of bonding a large LGO is incorporated. BW Gold argues that the impact of this omission on the project economics is minimal and compares it to a large increase of 25% in the price of gold ($500/oz). This is a flawed comparison – the project application was prepared based on $1400/oz and that is the basis for its assessment. CSFN's concern is that by omitting the difference in bonding cost from different alternative designs that the evaluation of alternatives is incomplete. BW Gold has not yet resolved these concerns. The assessment of the impact of the alternative storage option for LGO within the boundaries of TSF D as provided by Artemis does not consider major savings that will result from the elimination of the bond. CSFN had requested that economic analysis of including upfront mitigation for the LGO be compared with the proposed scenario of posting an adequate closure bond to move the material to the pit. As such, the assignment of -$233M Net Present Cost (NPC) to the project economics due to moving LGO to TSF D is not accurate. Assessment of the economic impact of any alternative option for management of LGO must be inclusive of all major costs and savings to produce satisfactory and reliable results. Information Request: Please clarify how the financial cash flow relates to the actual value of the part of the LGO that is not economical to process when all-inclusive costs of mining are considered. (Source Comment ID#25)	Please see attachment "R1_CSFN_Comment IDs 456, 457, 458, 459, 460.pdf"		CSFN	BWG		Alastair	TD	Ready for Submission	AT; June 28	Ready for Publishing
457	Chapter 3: Mine Plan	LGO Alternative Designs	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	Source continues to be concerned about this issue and will seek to reduce the risk via setting an appropriate bond and bond review process with EMLI. CSFNs will continue discussion of the LGO bonding cost through trilateral meetings with BW Gold and EMLI, to establish a cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate. (Source Comment ID#25)	The comment is acknowledged.		CSFN	BWG		Ryan	RT	Ready for Submission	RT; aug 24	Ready for Publishing
457	Chapter 3: Mine Plan	LGO Alternative Designs	CSFN - F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up		No	See response to comment ITT ID 456. (Source Comment ID#25)	The comment is acknowledged. BW Gold submitted to EMLI for distribution to the MRC an update to its proposed RLCE on October 13th. The update included the following proposed permit condition as part of its updated RLCE: *Prior to the commencement of stockpiling Low Grade Ore, and prior to each subsequential increment of 10 Mt, the Permittee will cause to be deposited with the Minister of Finance, a security in the amount of $22.1 million for rehandling of the stockpile upon closure. The security will be adjusted for reductions of 10 Mt increments from the Low Grade Ore stockpile based on evidence of stockpile drawdown provided to the satisfaction of the Chief Permitting Officer.* BW Gold looks forward to continuing to discuss with CSFN and EMLI its LGO bonding strategy through upcoming trilateral meetings (the next tentatively scheduled for Oct 31) to explain our rationale and cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate.		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
458	Chapter 3: Mine Plan	LGO Alternative Designs	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	Yes	[Please see comment #25 in the source doc for additional context] Information Request: Please update the calculations completed to assess the economic impact of storing LGO in the TSF to include savings from the reduced cost of bonding using updated values based on the concerns discussed in the comment in this memo titled Costing for the LGO Liability in the Closure Bond. (Source Comment ID#26)	Please see attachment "R1_CSFN_Comment IDs 456, 457, 458, 459, 460.pdf"		CSFN	BWG		Alastair	TD	Ready for Submission	AT; June 28	Ready for Publishing
458	Chapter 3: Mine Plan	LGO Alternative Designs	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	No new information was provided as part of this round of detailed review comments. CSFNs will continue discussion of the LGO bonding cost through trilateral meetings with BW Gold and EMLI, to establish a cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate. (Source Comment ID#26)	The comment is acknowledged.		CSFN	BWG		Ryan	RT	Ready for Submission	RT; aug 24	Ready for Publishing
458	Chapter 3: Mine Plan	LGO Alternative Designs	CSFN - F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up		Yes	Please refer to the Round 3 response under ITT ID 456. (Source Comment ID#26)	The comment is acknowledged. BW Gold submitted to EMLI for distribution to the MRC an update to its proposed RLCE on October 13th. The update included the following proposed permit condition as part of its updated RLCE: *Prior to the commencement of stockpiling Low Grade Ore, and prior to each subsequential increment of 10 Mt, the Permittee will cause to be deposited with the Minister of Finance, a security in the amount of $22.1 million for rehandling of the stockpile upon closure. The security will be adjusted for reductions of 10 Mt increments from the Low Grade Ore stockpile based on evidence of stockpile drawdown provided to*		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
459	Chapter 3: Mine Plan	LGO Size vs NSR and Cut-Off Grade	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	Yes	As discussed in comment #24, the inclusion of the cost of bonding in NSR will decrease the amount of ore that is economically viable to process by increasing the cut-off grade (COG). CSFN are concerned that the use of an incomplete NSR analysis will lead to ore being placed in the LGO that is not economically viable to process. Under the current mine plan and associated COG, the LGO is proposed to top out at approximately 111 Mt of material. Information Request: Please clarify what portion of the LGO will be rendered uneconomic to process when the cost of bonding is considered in the NSR and how the COG would change. In other words, how much will the size of the LGO stockpile decrease if NSR considers bonding costs? (Source Comment ID#27)	Please see attachment "R1_CSFN_Comment IDs 456, 457, 458, 459, 460.pdf"		CSFN	BWG		Alastair	TD	Ready for Submission	AT; June 28	Ready for Publishing
459	Chapter 3: Mine Plan	LGO Size vs NSR and Cut-Off Grade	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	No new information was provided as part of this round of detailed review comments. CSFNs will continue discussion of the LGO bonding cost through trilateral meetings with BW Gold and EMLI, to establish a cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate. (Source Comment ID#27)	The comment is acknowledged.		CSFN	BWG		Ryan	RT	Ready for Submission	RT; aug 24	Ready for Publishing
459	Chapter 3: Mine Plan	LGO Size vs NSR and Cut-Off Grade	CSFN - F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Information Requirement	No	See response to comment ITT ID 456. (Source Comment ID#27)	The comment is acknowledged. BW Gold submitted to EMLI for distribution to the MRC an update to its proposed RLCE on October 13th. The update included the following proposed permit condition as part of its updated RLCE: *Prior to the commencement of stockpiling Low Grade Ore, and prior to each subsequential increment of 10 Mt, the Permittee will cause to be deposited with the Minister of Finance, a security in the amount of $22.1 million for rehandling of the stockpile upon closure. The security will be adjusted for reductions of 10 Mt increments from the Low Grade Ore stockpile based on evidence of stockpile drawdown provided to the satisfaction of the Chief Permitting Officer.* BW Gold looks forward to continuing to discuss with CSFN and EMLI its LGO bonding strategy through upcoming trilateral meetings (the next tentatively scheduled for Oct 31) to explain our rationale and cost basis, including rehandling costs for the maximum LGO pile volume in		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing

460	Chapter 3: Mine Plan	LGO Size vs NSR and Cut-Off Grade	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	Yes	As discussed in comment #24, the inclusion of the cost of bonding in NSR will decrease the amount of ore that is economically viable to process by increasing the cut-off grade (COG). CSFN are concerned that the use of an incomplete NSR analysis will lead to ore being placed in the LGO that is not economically viable to process. Under the current mine plan and associated COG, the LGO is proposed to top out at approximately 111 Mt of material. Information Request: Clarify what economic impact moving this part of the LGO to the TSF would have on the Project, considering the corresponding reduction in bonding requirement. This is like how waste rock is proposed to be managed. (Source Comment ID#28)	Please see attachment "R1_CSFN_Comment IDs 456, 457, 458, 459, 460.pdf"		CSFN	BWG		Alastair	TD	Ready for Submission	AT; June 28	Ready for Publishing
460	Chapter 3: Mine Plan	LGO Size vs NSR and Cut-Off Grade	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	No new information was provided as part of this round of detailed review comments. CSFNs will continue discussion of the LGO bonding cost through trilateral meetings with BW Gold and EMLI, to establish a cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate. (Source Comment ID#28)	The comment is acknowledged.		CSFN	BWG		Ryan	RT	Ready for Submission	RT; aug 24	Ready for Publishing
460	Chapter 3: Mine Plan	LGO Size vs NSR and Cut-Off Grade	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Information Requirement	No	The comment remains open and is being carried forward. (Source Comment ID#28)	BW Gold maintains the same position on this as it provided in "R1_CSFN_Comment IDs 456, 457, 458, 459, 460.pdf" in response to comments 456 and 457 which respectively state: ***456:*** *For the purpose of reserve definition, an elevated NSR cut-off was assumed which is approximated by a 0.24 g/t Aueq grade. As such, the application of bonding costs to the NSR value does not materially change the economics of the low grade ore stockpile. This is confirmed in an internal confidential financial cashflow model developed by BW Gold, where bonding costs were addressed. Good stockpile management practices dictate that material added and retrieved from the stockpile be closely monitored and reconciled back to planned grades. These management*		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
461	Chapter 4: Reclamation and Closure Plan	Testing for Long-term Treatment	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Jun 02, 2022	1	New	Recommendation	Yes	Given the uncertainty identified with the sulfate treatment (Sulf-IX and NF treatment methods), site-specific pilot information supported by appropriate analogue site data will be required prior to the submission of the initial Mines Act Permit Application. Recommendation: The Application must include a schedule for Post-Closure work to reduce this risk well in advance of this work being required, ideally within the first 5-10 years of mining. (Source Comment ID#29)	Appendix 5-H "Water Treatment Plan for Sulphate Control at Blackwater during Operations and Post-Closure" contains details in: Section 7.1 - Key Performance Indicators Section 9.2 Ability to Reach and Maintain Environmental Compliance (including during Post-Closure) Section 10 - Pilot and Full Scale Operational Data for Proposed Membrane Treatment Systems The report identifies risks and measures to mitigate identified risks through LoM and Post-Closure.		CSFN	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
462	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Pit Dewatering	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Often during periods of C&M, water builds up in mine pits and needs to be addressed prior to re-start. The "ramp up" period needs to consider the potential for dewatering of the pit lake. Currently the plan appears to assume no water will build up in the open pit, however without more work to determine where water goes, this assumption is not considered reasonable. Given the limitations placed on dumping water in the TSF (EAC Condition 33), evidence is required that the treatment systems are adequate, and the water balance can avoid surplus buildup without storing water in the pit. A quantitative evaluation is required to support the approach to excess water management in C&M. Recommendation: Please provide a quantitative assessment to support the statements that the pit will indeed be dewatered for years 1-17. (Source Comment ID#30)	Refer to response to comment #441.		CSFN	BWG		TD	TD	Ready for Submission	TD, 13-Jun-22	Ready for Publishing
462	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Pit Dewatering	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#30)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022. The modelling assumed that the open pit remains in a dry, dewatered state.		CSFN	BWG		TD	TD	Ready for Submission	TD, 23-Aug-22	Ready for Publishing
463	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Water Treatment Capacity Requireme	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	During operations "pore lockout", the water in tailings pores, is a significant water sink, ranging from approximately 2 to 8 Mm3/year depending on project phase and mill throughput. During a C&M period, the mill will cease operation and pore lockup will no longer be a significant sink for water. This change significantly increases the volume of surplus water requiring management at the site. During operations, the capacity of the sulphate WTP is approximately 2 Mm3/year. Source is concerned that the operations phase water treatment capacity is not sufficient to maintain a stable water balance	Refer to response to comment #441.		CSFN	BWG		TD	TD	Ready for Submission	TD, 13-Jun-22	Ready for Publishing
463	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Water Treatment Capacity Requireme	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#31)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022. The modelling outputs revealed that an increase in treatment capacity of the membrane treatment plant is required to manage the VCC climate outputs over the 20 year period of 72 L/s to 110 L/s..		CSFN	BWG		TD	TD	Ready for Submission	TD, 23-Aug-22	Ready for Publishing
463	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Water Treatment Capacity Requirements	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	As indicated from the results of the WB/WQ modelling work, regardless of the scenario modelled, upon entering a C&M period, the project needs additional water treatment capacity. This is a critical component for the satisfactory management of site WB/WQ in periods of C&M to ensure the project meets the requirements set out in EAC Condition 33. The underestimation of the contaminants loading by the source terms used for C&M modelling, the limited availability of coverage material for the exposed tailings beaches, and the significantly higher volume of water that must be managed/treated during a C&M period, increase the risk of water quality exceedances and negative environmental impacts during a C&M period for the project. Due to the extremely low capacity of the downstream environment for additional loads of contaminants, it is crucial that the necessary water treatment capacity is available as soon as possible so it can be used when needed. Therefore, it is recommended that BW Gold increase water treatment capacity of the project as soon as possible after entering a period of C&M. Recommended Permit Condition: If a period of C&M occurs, BW Gold must add the estimated additional water treatment capacity (110 L/s vs. 72 L/s during operations) within one year of entering the C&M period. Recommendation to the Province: Quantitative Assessment for Periods of C&M CSFNs appreciate BW Gold's collaborative approach to the development of the C&M Plan. Most of the issues that had been raised previously by the CSFNs are resolved in the updated C&M Plan. CSFN would like to highlight the positive outcomes of the quantitative assessment and the analysis of various potential scenarios for the period of C&M that were completed by BW Gold. These include a better understanding of the site conditions and requirements with implications for mine planning and design to ensure the necessary mitigation measures can be put in place, in a timely and effective manner, should the project enter a C&M period. BW Gold, CSFN, and the Province appreciate the value and the benefits of the C&M exercise that was completed for the Project. As such, we would strongly recommend to the province to include a quantitative assessment of site water balance and quality (WB/WQ) and the necessary mitigation measures for periods of C&M as a requirement for all projects seeking regulatory approvals. (Source Comment ID#31)	Based on the outcomes of the C&M modelling completed to inform an update to the EAC condition 11 C&M plan, Section 6.8 - Monitoring and Managing Build-up of Water Surplus in the Tailings Storage Facility of EAC Condition 11 plan was updated with the following: *The Operational water treatment rate is 72 L/s (up to 2.3 Mm3/yr; Appendix D) and the treatment rate required during C&M is 110 L/s (up to 3.5 Mm3/yr) under the variable climate scenario modelled for the C&M period (Appendix D).* Furthermore, Section 6.9 Mine Site Water Management and Water Treatment Plants was updated with the following: *During C&M, the Membrane WTP will continue to treat surplus supernatant pond water from TSF C, however as indicated in Section 6.8 a higher maximum treatment rate is required (increasing from 72 L/s in Operations to 110 L/s for all C&M scenarios under the variable climate case). The costs (capital and operating) as well time to construct the additional treatment facility is provided in Appendix F.* Consequently, BW Gold agrees with the permit condition of adding the estimated additional water treatment capacity, however, market conditions outside of BW Gold's direct control (e.g. availability of parts, equipment and contract labor) will likely play a factor in the timing to get the plant capacity increased. BW Gold would propose to revise the permit condition proposed by CSFN as follows: *If a period of C&M occurs, BW Gold must initiate the process of tendering contract to add the estimated additional water treatment capacity (110 L/s vs. 72 L/s during operations) within 90 days of entering the C&M period.* BW Gold also appreciated CSFN's engagement and collaboration of the development of the C&M plan and the positive outcomes of the agreed upon water balance and water quality modelling to inform possible changes to water treatment capacities and managing water quality in periods of C&M.		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing

464	Chapter 4: Reclamation and Closure Plan	Preparations for a C&M Period	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	The point of the C&M condition is to consider the need for project design, so the project is prepared for C&M. By deferring these considerations to mine operations, the risks to the First Nations communities are greater as it will be too late to make project design changes. The point of permitting is to design the project, with the ability to modify designs to make improvements – but avoiding an initial design until after permitting is not appropriate. Permitting is a detailed design as stated many times in the EA process. The suggestion to defer these topics even further, after permitting, is not appropriate and conflicts with the statements of the Holder and the permitting agencies during the EA process. As an example, is more capacity required in the water management pond (WMP) or the TSF for C&M or are other design modifications required such as increased treatment plant capacity? Recommendation: CSFN is pleased that operational plans are robust and would like to see some thought go into robust C&M Planning. Please ensure the Application adequately addresses periods of C&M. EAC conditions 11 and 33 combined explicitly mandate the provision of C&M. (Source Comment ID#32)	Refer to response to comment #441		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
464	Chapter 4: Reclamation and Closure Plan	Preparations for a C&M Period	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#32)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022.		CSFN	BWG		Travis	TD	Ready for Submission	TD, Aug 30	Ready for Publishing
465	Chapter 4: Reclamation and Closure Plan	Use of Operations Phase Strategies in C&M	CSFN	Knight Piésold Ltd. and Lorax Environmental Service Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must verify the applicability of the Operations Phase water management and treatment strategies and procedures during a C&M period before implementation. Despite both phases following some common objectives, the changes to water balance model are expected to be significant for a C&M period compared to the Operations period. (Source Comment ID#33)	Refer to response to comment #441		CSFN	KP	Lorax	Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
465	Chapter 4: Reclamation and Closure Plan	Use of Operations Phase Strategies in C&M	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#33)	Refer to response to comment #441.		CSFN	BWG		Travis	TD	Ready for Submission	TD, Aug 30	Ready for Publishing
466	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Ramp Up Period	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	There is no indication in the Application of the factors that would allow for a re-start including dewatering of the pit, should that occur. Source recommends further work be completed with scenarios including: •a significant buildup of water in the pit, •a relatively minor buildup of water in the pit, •brine management in the pit, or •no water builds up. If the pit requires dewatering, there is a strong possibility that a re-start of the mine will not be allowed, depending on the permit conditions. Further planning for these scenarios is required. Simply moving water to the TSF can increase risks and may not be acceptable given previous problems with this water management approach in BC mines. If water does accumulate in the pit, the size of the treatment system should be evaluated to see if the pit level can be drawn down in a reasonable time to allow the return to operation. Further, where does water treatment brine get deposited in a C&M scenario specifically? Recommendation: Please ensure a quantitative water balance model for C&M followed by a return to operations is completed, to evaluate the potential for water to build up in the pit. (Source Comment	Refer to response to comment #441.		CSFN	BWG		TD	TD	Ready for Submission	TD, 13-Jun-22	Ready for Publishing
466	Chapter 4: Reclamation and Closure Plan	Care and Maintenance – Ramp Up Period	CSFN - P. Littlejohn, F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#34)	The outcomes of the Care and Maintenance modelling scenarios were presented to the CSFN's in a technical meeting on August 11, 2022. The outcomes were also presented to the entire EMC on August 18th. The updated Care and Maintenance plan incorporating the ourtcomes of the C&M modelling was distributed to the EAO, EMLI and Indigenous nations on August 21. 2022. The modelling outputs revealed thast Scenarios 1 and 2 have a ramp up period of approx 1.5 years, whereas scenario 3 has a rampup period of 6-8 years.		CSFN	BWG		TD	TD	Ready for Submission	TD, 23-Aug-22	Ready for Publishing

467	Chapter 4: Reclamation and Closure Plan	Discount Rate Chosen	CSFN	Rolf Schmitt, P.Geo.; ERM Consultants Canada Ltd	Jun 02, 2022	1	New	Information Requirement	No	Discount rates for reclamation cost estimation must have some relation between the current rate of inflation and the current “safe” return on investment. In other words, it is not acceptable or reasonable to use net present value discount rates that reflect years gone by when federal interest rates (i.e.., rate of “safe” return) were higher and the rate of cost escalation/inflation was lower. For example, the use of discount rates of 3-4% does not reflect current economic conditions. The actual trend of cost escalation can be seen in Statistics Canada data for the Industrial Product Price Index (IPPI)1. The metric for Fabricated metal products and construction materials [P63] shows an annual rate of cost escalation of 5.2% over the past 10 years, 8.8% over the past 5 years, and 17.5% over the past 2 years2. During the same span, the Bank of Canada’s overnight interest rate has ranged from 0.25% to 1%. The implication of the vast difference between the current rate of cost escalation and the current rate of “safe” return is that use of any positive discount rate will vastly underestimate the cost of long-term maintenance. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810026501 2 Values calculated from February 2012, 2017, and 2020 to February 2022, respectively Information Request: Please discuss how the discount rate for reclamation security cost estimation was chosen for Blackwater and its basis in the context of broader macroeconomic conditions. (Source Comment ID#35)	BW Gold acknowledges that the selection of the Discount Rate to apply to the NPV calculations for the LoM Reclamation Liability Cost estimate is an important subject. BW Gold intends to follow the policy direction of EMLI in the April 2022 Interim Major Mines Reclamation Security Policy. BW Gold notes that throughout the LoM, the status of reclamation liabilities is regularly reviewed, and the reclamation cost is updated using current inflation rates.		CSFN	ERM		Rolf	RT	Ready for Submission	AT, June 19	Ready for Publishing
467	Chapter 4: Reclamation and Closure Plan	Discount Rate Chosen	CSFN - P. Littlejohn	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information requirement	No	EMLI's policy notwithstanding, if Artemis appreciates the importance of updating the reclamation cost using current inflation rates, why not start on the right foot by using discount rates that reflect current inflation rates for the initial reclamation cost update? (Source Comment ID#35)	BW Gold intends to follow the policy direction of EMLI in the April 2022 Interim Major Mines Reclamation Security Policy.		CSFN	BWG				Ready for Submission	AT, Aug31	Ready for Publishing
467	Chapter 4: Reclamation and Closure Plan	Discount Rate Chosen	CSFN - P. Littlejohn	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Information requirement	Yes	Acknowledged. CSFN has concerns about this policy but will raise them with EMLI. (Source Comment ID#35)	BW Gold acknowledges that CSFN has concerns about the April 2022 Interim Major Mines Reclamation Security Policy that they plan to raise directly with EMLI. BW Gold looks forward to continuing to discuss with CSFN and EMLI its RLCE through upcoming trilateral meetings (the next tentatively scheduled for Oct 31).		CSFN	BWG	Travis				TD, Oct 17	Ready for Publishing
468	Chapter 4: Reclamation and Closure Plan	Covering Reclamation Security via Promissory Note	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	In previous comments, Artemis has implied that they will cover the reclamation bond via a promissory note rather than by posting cash with EMLI. Promissory notes typically do not escalate in value, and as no cash would be posted, it would not be possible for EMLI to manage these funds such that return on investment is generated. Use of discounting in estimating the reclamation security cost assumes that some return on investment is earned before the bond is required. Recommendation: If a promissory note is proposed to be used by Artemis to cover the reclamation	On a point of clarification, Artemis expects to be required to provide financial security in the form of a financial guarantee bond (not a promissory note), which is to be endorsed by a duly authorized surety provider. Under the Health, Safety and Reclamation Code for Mines in British Columbia, Parts 10.4.1, 10.4.4, and 10.4.5 Artemis is required to provide annual updates of the reclamation and closure plan. As such, Artemis anticipates that the financial security will be updated, if required, in line with these plans to reflect the (then) latest disturbances and present value cost of reclamation.		CSFN	BWG		Alastair	TD	Ready for Submission	AT, June 29	Ready for Publishing
468	Chapter 4: Reclamation and Closure Plan	Covering Reclamation Security via Promissory Note	CSFN - P. Littlejohn	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Artemis has stated that they will cover the reclamation bond via a financial guarantee bond rather than by posting cash with EMLI. Financial guarantee bonds typically do not escalate in value, and as no cash would be posted, it would not be possible for EMLI to manage these funds such that return on investment is generated. Use of discounting in estimating the reclamation security cost assumes that some return on investment is earned before the bond is required. **Recommendation to EMLI:** If a financial guarantee bond is proposed to be used by Artemis to cover the reclamation security cost for the Blackwater project, then the value of the financial guarantee bond should be required to be updated (increased) on an annual basis in line with the rate of discounting used. (Source Comment ID#36)	The comment is acknoweledged as a recommendation to EMLI, and BW Gold looks forward to discussing at the appropriate time.		CSFN	BWG		Ryan	RT	Ready for Submission	RT; aug 24	Ready for Publishing
468	Chapter 4: Reclamation and Closure Plan	Covering Reclamation Security via Promissory Note	CSFN - P. Littlejohn	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Recommendation	No	The comment remains open and is being carried forward. (Source Comment ID#36)	BW Gold looks forward to continuing to discuss with CSFN and EMLI its RLCE through upcoming trilateral meetings (the next tentatively scheduled for Oct 31).		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
469	Chapter 4: Reclamation and Closure Plan	Post-Closure Water Treatment	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Water treatment is proposed during operations and during post-closure using the membrane water treatment plant. During closure, the membrane water treatment plant will be offline for ~20 years. This is a long period for a complex system to be offline. Is the intent to build an entirely new WTP for post-closure or to expand/refurbish the WTP prior to the post-closure phase? Recommendation: Please describe what infrastructure is expected to be maintained during closure versus what is expected to be built during the closure phase. What level of work/cost is expected to be required to refurbish the WTP so it can be operational during Post-Closure? Has the cost of this activity been incorporated into the reclamation security cost estimate? (Source Comment ID#37)	The reclamation cost estimate assumes that the membrane water treatment plant used during operations will not be available for use during post closure, and consequently includes the cost of building new plant for Post-closure. However, BW Gold will assess the condition of the existing membrane water treatment plant used during operations and salvage components that are still fit for operations and properly discard of components past their useful life. This can be clarified in a future version of the RCP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups		CSFN	BWG	BW	Ryan/Alastair to finish	RT	Ready for Submission	RT; June 29	Ready for Publishing
469	Chapter 4: Reclamation and Closure Plan	Post-Closure Water Treatment	CSFN - P. Littlejohn	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Question	No	Thank you. Has the cost of constructing a new WTP for post closure been incorporated into the reclamation security cost estimate? (Source Comment ID#37)	The updated RLCE will capture the closure cost liability for the mine, including the water treament capital costs and operating costs, in accordance with EMLI guidance. The strategy for water treatment which forms the basis for the estimate will be summarized as part of the update.		CSFN	BWG		Rolf		Ready for Submission		Ready for Publishing
469	Chapter 4: Reclamation and Closure Plan	Post-Closure Water Treatment	CSFN - P. Littlejohn	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Question	No	Comment will remain open until the updated closure cost estimate has been reviewed. (Source Comment ID#37)	BW Gold submitted to EMLI for distribution to the MRC an update to its proposed RLCE on October 13th. BW Gold looks forward to continuing to discuss with CSFN and EMLI its RLCE through upcoming trilateral meetings (the next tentatively scheduled for Oct 31) to explain our rationale and cost basis for the RLCE and respond to any comments provided.		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
470	Chapter 4: Reclamation and Closure Plan	Nature of Closure/Post-Closure Water Treatment	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Information Requirement	No	Was a Best Available Technology assessment carried out for water treatment in the Closure/Post-Closure phases? If not, such a study should be conducted in order to address water quality exceedances in Closure/Post-Closure. (Source Comment ID#38)	The assessment of best achievable technology for sulphate control (membrane WTP) was documented in a report titled "Sulphate Removal from Blackwater Tailings Storage Facility Supernatant and Seepage during Closure and Post-Closure" (BQE Water, 2017).		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 16	Ready for Publishing

471	Chapter 4: Reclamation and Closure Plan	Pre-Mine Land and Aquatic Ecosystem Capability	CSFN	Justin Straker, M.Sc, P.Ag Integral Ecology Group and Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Clarification	No	Pre-mine land capability was determined through Terrestrial Ecosystem Mapping prior to 2013. Clarification: Are 2013 Terrestrial Ecosystem Mapping observations of soil moisture and nutrient regimes representative of current conditions? (Source Comment ID#39)	Yes, 2013 TEM is representative of current conditions. The primary influences on soil moisture and nutrient regimes are (1) climate, (2) topography, and (3) soil properties (soil particle-size distribution, organic-matter and nutrient content). While climate continues to shift due to climate change, the baseline soil properties are expected to be relatively static. The temporal resolution of the climate models used to project ecosystem shifts with climate change in the ecohydrological modeling is not sufficient to quantitively compare 2013 with current conditions, but we expect climate change to have had limited effects on this ecosystem type (i.e.., BEC subzone variants and sites series) over this period.		CSFN	IEG		Justin Straker (IEG)	TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
472	Chapter 4: Reclamation and Closure Plan	Post-Mine Land Capability	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Clarification	No	The stated closure and end land use goals for the Project on lands and waters that are disturbed by mine activities are to reclaim ecosystems to achieve an average land and water capability in these areas not less than that existing prior to Project development. However, it is also stated that "Despite differences between pre-development and post-closure conditions, it is anticipated that ecosystems established on the post-mining landscape will provide value for intended land uses." An ecohydrological model was used to determine the reclaimed ecosystems that the post-mine landscape is most likely to support. Ecohydrology modeling relies on soil available water-storage capacity, organic-matter content, and bulk density in the upper metre of the soil profile. Results of the ecohydrological model indicate that the post-mine ecosystems and land capability will shift towards drier ecosystems compared to pre-mine conditions. Clarification: Will the post-mining landscape provide ecosystems to achieve an average land and water capability that is not less than that existing prior to Project development? (Source Comment ID#40)	BW Gold has acknowledged that there will be challenges for reclaiming target ecosystems (see Section 4.1.4 of Chapter 4, Reclamation and Closure Plan). This includes unfavourable post-mining soil characteristics affecting reclamation success and successional trajectories, including soil depth, texture, bulk density, moisture availability, nutrient contents and cycling capabilities, and erosion losses. Thus while the ultimate goal of the all reclamation will be to achieve a positive or equal ecosystem quality when compared to pre-mine capability (allowing for natural variation) there will be limitations and challenges. Therefore BW Gold has stated that the closure and end land use goals on lands and waters that have been disturbed by mine activities will be to"..reclaim ecosystems to achieve an average land and water capability in these areas not less than that existing prior to Project development." With this target it is expected that some ecosystems may be left better or worse as long as the average is not less than pre-development conditions. See also response to comment #853		CSFN	ERM		Rolf	RT	Ready for Submission		Ready for Publishing
473	Chapter 4: Reclamation and Closure Plan	Reclamation-Material Suitability and Salvage – Soil Sampling	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Clarification	No	Element concentration thresholds should be evaluated relative to ranges of natural variation in soils within the Project area as soil salvage samples are collected. In cases where baseline conditions exceed CCME parkland thresholds for soil and Contaminated Sites Regulation (BC CSR) soil standards (Schedule 3.1 of B.C. Reg. 375/96) for reverted wildlands, thresholds may need adjustment. Clarification: EMA has Technical Guidance for soil sampling Site Characterization and Confirmation Testing and protocols for Establishing Local Background Concentrations in Soil. Will these documents be used to characterize soil to ensure that it is suitable for reclamation and establishing background soil quality? (Source Comment ID#41)	As noted in Section 4.4 "Although some components or infrastructure associated with the mine site may not be subject to the BC CSR, the policies and technical guidance developed by BC ENV to support the CSR can still be used to guide site investigations and closure plans for the mine site." The EMA Technical Guidance Documents can be used for guidance but adjustments may be made (under the direction of a CSAP or other qualified professional) based on known baseline conditions. As discussed in Section 4.2.1.5: "Because baseline condition disturbance levels are low in the Project area, any elevated concentrations should be interpreted as reflecting natural mineralization of surface soils rather than contamination, and will not affect suitability ratings for reclamation."		CSFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
473	Chapter 4: Reclamation and Closure Plan	Reclamation-Material Suitability and Salvage – Soil Sampling	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Aug 11, 2022	2	Follow Up	Information Request	No	The Environmental Management Act includes protocol for establishing natural background concentration of elements in soil. Please provide additional rationale on why the Ministry of Environment and Climate Change Strategy protocols are not applicable to the proposed development. Please provide the scientific bases of the assumption that "any elevated concentration should be interpreted as reflecting natural mineralization." Furthermore, provide rationale on why potentially naturally localized mineralized soil that may be excavated from depths of greater than one metre would be suitable for wide-spread surface reclamation, regardless of the natural concentration of heavy metals. (Source Comment ID#41)	Section 4.4 describes the rationale for when the BC CSR is not applicable based on the absence of prior anthropogenic activities which could give rise to un-natural (not found in original background) sources of contamination. The BC CSR applies to soil where anthropogenic contamination is introduced. Section 4.4 notes that there is no record of spill or contamination from prior exploration activities, hence there is no need for sampling for potential contaminants of concern during baseline surveys. Sections 2.3.5.3, 2.3.5.4, and 2.3.5.5, describes the baseline soil surveys undertaken and the methods followed to determine soil suitability for reclamation, soil nutrient and soil metal analysis (Table 2.3-6) consistent with MCCS requirements, including BC CSR and CCME standards. Baseline elevated concentrations of metals in soils are assumed to reflect geological conditions, which may be influenced by underlying natural mineralization as the Blackwater Project area is underlain by geology which contains metallic mineral deposits. Interpreting the source of elevated metal concentrations in soils can be complex, requiring a full understanding of underlying geology, glacial history and surficial deposit transport, hydromorphic processes and post-glacial biogeochemical processes. BW Gold wishes to clarify the reviewers understanding that the Project intends to use salvaged overburden (OVB)(mineralized soil) for "wide-spread surface reclamation regardless of the natural concentration of heavy metals". As stated on page 2-35 of the Application, Preliminary suitability criteria for selection of OVB that is appropriate for use as a reclamation material include: "element concentrations that are below CCME thresholds for parkland soils (or alternate Project-specific criteria if elevated concentrations of surfaces soils are detected at baseline). All use of soil for reclamation is under the direction of a qualified professional and will conform to the approved Reclamation and Closure plan.		CSFN	ERM		Rolf		Ready for Submission	AT, Aug 11	Ready for Publishing
474	Chapter 4: Reclamation and Closure Plan	Reclamation-Material Suitability and Salvage – Particle Size Distribution	CSFN	Justin Straker, M.Sc, P.Ag Integral Ecology Group and Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Ecohydrology modeling relies on available water-storage capacity based on particle-size distribution, organic-matter content, and bulk density in the upper metre (m) of soil. Laboratory baseline testing of particle-size distribution, organic-matter content, and bulk density could not be located in the submission. Information Request: How many soil samples were analyzed for particle-size distribution (PSD), organic-matter content, and bulk density was completed during the baseline assessment? (Source Comment ID#42)	Overburden: 16 samples were analyzed for PSD. Surface soil: 46 samples were analyzed for OM. PSD was based on field estimates of coarse fragment content and hand texturing. Supplemental nutrient data from the BC Soil Survey were used. No laboratory data for bulk density were available from the baseline assessment Data inputs for ecohydrological modeling are described in Section 3.1 of Appendix E-E (Detailed Post-closure Mapping Methodology).		CSFN	IEG		Justin	AT	Ready for Submission	TD, Jun 27	Ready for Publishing
474	Chapter 4: Reclamation and Closure Plan	Reclamation-Material Suitability and Salvage – Particle Size Distribution	CSFN	Justin Straker, M.Sc, P.Ag Integral Ecology Group and Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Aug 11, 2022	2	Follow Up	Clarification	No	The primary inputs to a quantitative ecohydrological analysis model are PSD, OM content, soil depth, and topographical data, as well as layering arrangements within the soil profile. It is unfortunate that no grain sized distribution analysis (i.e., sieve grain size and hydrometer laboratory analysis) for the surface soil was completed for one of the primary input parameters to the quantitative ecohydrological analysis model. Please clarify why this was not completed. (Source Comment ID#42)	BW Gold acknowledges that the lack of laboratory analysis for PSD is a shortcoming. The need for detailed PSD data beyond soil texture and coarse-fragment content was not known at the time of the baseline surveys. BW Gold plans to collect this information during the sampling programs for soil salvage and stockpiling (Section 4.2.6.1, Reclamation Material Monitoring during Salvage and Stockpiling) and following construction of reclamation covers (Section 4.2.6.2, Permanent Sample Plots). These data will be used in updates to the QEA model to refine post-closure ecosystem projections.		CSFN	IEG		Justin		Ready for Submission	TD; Aug 15	Ready for Publishing

475	Chapter 4: Reclamation and Closure Plan	Reclamation-Material Suitability and Salvage – Baseline Testing	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Clarification	No	It appears that relative soil moisture and nutrient regimes were based on field data descriptions from 2013 and professional experience. Laboratory baseline testing of soil moisture and nutrient content could not be located in the submission documents. Clarification: Were any soil samples submitted for laboratory analyses of moisture or nutrient content during the baseline assessment? (Source Comment ID#43)	Thank you for noting this contradiction. The text will be updated to clarify that soil moisture and nutrient regimes were in fact based on field data descriptions (based on the Field Manual for Describing Terrestrial Ecosystems (BC MOF and BC MOE, 1998)). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		CSFN	ERM		sent to Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
476	Chapter 4: Reclamation and Closure Plan	Contaminated Sites and Human Health and Ecological Risk Assessment – Certificate of Compliance	CSFN	Lesley Shelley, Ph.D., R.P.Bio, Entia Environmental Consultants	Jun 02, 2022	1	New	Clarification	No	By the end of the Closure and Reclamation phase, it is stated that "any areas of environmental concern are expected to be addressed through remediation and/or risk assessment to ensure that biological receptors are protected from the potential for adverse effects in the long term and that end land use objectives can be met." Clarification: Will a Certificate of Compliance under the Environmental Management Act be obtained once all areas of environmental concern are remediated? (Source Comment ID#44)	BW Gold is committed to ensuring that any areas of environmental concern are reclaimed or remediated to ensure that biological receptors are protected from the potential for adverse effects and end land use objectives are met, whether or not a Certificate of Compliance is sought (e.g., to address legal liability or site redevelopment). Based on the current mine plan, the Closure phase is many years away and it is likely that the process and legal framework for completing reclamation or remediation under either the Environmental Management Act or Mines Act will evolve and a Certificate of Compliance may or may not be required in the future. Given the potential for change in process or regulatory frameworks, BW Gold has not determined at this time whether a Certificate of Compliance would be sought once closure and reclamation is complete. BW Gold is committed to following the legal frameworks, standards, and processes that are current at the time of Closure phase.		CSFN	Entia		Lesley	RT	Ready for Submission	RT; June 19	Ready for Publishing
477	Chapter 4: Reclamation and Closure Plan	Contaminated Sites and Human Health and Ecological Risk Assessment – Site Investigati	CSFN	Lesley Shelley, Ph.D., R.P.Bio, Entia Environmental Consultants	Jun 02, 2022	1	New	Clarification	No	During the closure phase, a site investigation (Stage 1 preliminary site investigation and if necessary, Stage 2 detailed site investigation; BC ENV 2016a, 2016b) will be completed to identify any areas of environmental concern where concentrations of parameters are greater than the standards prescribed under the BC CSR (BC ENV 2009). The BC Contaminated Sites Regulation was last amended July 7, 2021, by B.C. Reg. 179/2021. Clarification: Please confirm whether a site investigation will be completed to identify any areas of environmental concern where concentrations of parameters are greater than the current CSR standards. (Source Comment ID#45)	BW Gold confirms that a site investigation will be completed to identify any areas of environmental concern where concentrations of parameters are greater than BC CSR standards. The BC CSR standards (B.C. Reg. 375/96, as amended from time to time) that are current at the time of the site investigation would be used as the numerical standards against which parameter concentrations would be compared.		CSFN	Entia		Lesley	RT	Ready for Submission	RT; June 19	Ready for Publishing
478	Chapter 4: Reclamation and Closure Plan	Contaminated Materials – Sample Collection	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Clarification	No	It is stated that "soil samples will be collected and tested by a qualified professional at locations where fuel and chemicals were handled extensively during construction and operation." Clarification: Will groundwater and soil vapour samples also be collected and analyzed from locations where fuel and chemicals were handled extensively during construction and operation? (Source Comment ID#46)	Groundwater (where present) samples will also be co-collected along with soil and soil vapour samples from locations where fuel and chemicals were handled extensively and results compared to the BC CS Regulations for management level decision making and potential excavation and treatment/removal.		CSFN	ERM		Rolf	RT	Ready for Submission	TD, Jun 23	Ready for Publishing
479	Chapter 4: Reclamation and Closure Plan	Contaminated Materials – Core and Non-Core Mine Components	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Clarification	No	Contaminated site remediation requirements for mining projects in British Columbia focus on "non-core" mine components (Part 5. Remediation of Mineral Exploration Sites and Mines, Chapter 53, Environmental Management Act [2003]). Non-core Project components include, but may not be limited to, the Maintenance/Truck Shop, storage facilities (including the Bulk Fuel and Ready Line), camps, and the Processing Plant. A remediation order under section 48 (remediation orders) of EMA in relation to the remediation of a core area of a producing or past producing mine may be issued if requested to do so by the Chief Inspector of Mines under the Mines Act. Clarification: Will both Core and Non-core area of the property be remediated in accordance with Environmental Management Act (2003)? (Source Comment ID#47)	Please refer to section 4.4 for a discussion of site-wide remediation requirements: "Once mining operations end and before the Project can be considered closed, any areas of known or suspected contamination need to be identified and remediated, removed, or otherwise resolved (e.g., through human health and ecological risk assessment). Although some components or infrastructure associated with the mine site may not be subject to the BC CSR, the policies and technical guidance developed by BC ENV to support the CSR can still be used to guide site investigations and closure plans for the mine site. The overall objective is to ensure that end land use objectives are met and there are no areas of environmental concern or parameters of concern (POC) that could pose a risk to human or ecological receptors in the long term"		CSFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing

480	Chapter 4: Reclamation and Closure Plan	Topsoil Stockpiles and Its Use in TSF Closure and Remediation	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	Table 4.2-4 provides a reclamation materials balance showing quantities of glaciofluvial surface soil, mixed-mineral surface soil, and organic surface soil. While it is noted in several places in Chapter 3 and Chapter 4 that the salvage of reclamation media at the site would follow a focused salvage plan, the portion of the tailings beach that could be covered with materials stored in Topsoil Stockpiles should be indicated. Also, for clarity and consistency, it would be helpful to indicate clearly in Table 4.2-2 which stockpiles will be used to source glaciofluvial parent material and mixed parent materials (both material types listed as surface soil). Recommendation: Update Table 4.2-2 to indicate which stockpiles will source "surface soil" reclamation materials indicated. While it is understood that exact quantities of each material type will be confirmed by later site investigations, a high-level quantitative assessment showing how currently estimated quantities of different types of salvage material stored in the various topsoil stockpiles will be used should be provided to support the reclamation and closure plans provided in Section 4. (Source Comment ID#48)	A future iteration of the Reclamation and Closure Plan will be updated to illustrate which stockpiles are anticipated to store surficial soil, with allowance for variation based on future site investigations.		CSFN	ERM		Rolf - Peter	RT	Ready for Submission	RT June 26	Ready for Publishing
481	Chapter 4: Reclamation and Closure Plan	Topsoil Stockpiles and Its Use in TSF Closure and Remediation	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	Table 4.2-4 provides a reclamation materials balance showing quantities of glaciofluvial surface soil, mixed-mineral surface soil, and organic surface soil. While it is noted in several places in Chapter 3 and Chapter 4 that the salvage of reclamation media at the site would follow a focused salvage plan, the portion of the tailings beach that could be covered with materials stored in Topsoil Stockpiles should be indicated. Also, for clarity and consistency, it would be helpful to indicate clearly in Table 4.2-2 which stockpiles will be used to source glaciofluvial parent material and mixed parent materials (both material types listed as surface soil). Recommendation: Provide calculation to confirm that there will be adequate volumes of surface soil	A future iteration of the Reclamation and Closure Plan will show materials stored in each stockpile. The data and approach that confirm adequate volumes of surface soil materials are presented in Section 4.2.1.4 and Table 4.2-4. These are based on volume calculations (area x depth) for each polygon in which soil is salvaged (supply) and placed (demand), and thus cannot be easily summarized in a calculation. However, additional detail is presented in Table 4.2-3 and the Soil Management Plan, Appendix 9-B.		CSFN	ERM	KP	Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
482	Chapter 4: Reclamation and Closure Plan	Topsoil Stockpiles and Its Use in TSF Closure and Remediation	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #48 in the source doc for additional context] Recommendation: Provide calculation to confirm that there will be adequate volumes of surface soil materials to place the full cover described in Chapter 4. Note also that an analysis should be completed to see if the tailings beach cover could truly be designed in a way that could potentially reduce the need for site water treatment post closure. (Source Comment ID#49)	A future iteration of the Reclamation and Closure Plan will show materials stored in each stockpile. The data and approach that confirm adequate volumes of surface soil materials are presented in Section 4.2.1.4 and Table 4.2-4. These are based on volume calculations (area x depth) for each polygon in which soil is salvaged (supply) and placed (demand), and thus cannot be easily summarized in a calculation. However, additional detail is presented in Table 4.2-3 and the Soil Management Plan, Appendix 9-B.		CSFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
483	Chapter 4: Reclamation and Closure Plan	Salvage and Preservation of Overburden Materials	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	In this project, overburden (OVB) is described in Chapter 4 as "unconsolidated soil and non-soil surficial materials that underly surface soils and occur at depths greater than 0.5m below the interface between organic and mineral soil horizons." Overburden materials that are proposed to be used as cover for above water tailings beaches will be sourced from the Lower Waste Stockpile. The Application also notes that most OVB will be stripped during development of the Open Pit and placed in its storage location as specified in a soil salvage plan that will be developed. While it is understood that there are intentions to carefully sort and place reclamation media in their respective stockpiles so that those materials can be used for their intended purpose, the potential for OVB to become buried by waste rock seems significant since most of these materials will be salvaged early in the mine's development. Recommendation: The salvage plan should indicate measures that will be taken to ensure that reclamation media stockpiles are preserved and that materials that are being relied on for site reclamation do not become buried or otherwise sterilized or stranded. (Source Comment ID#50)	The Soil Management Plan (Appendix 9-B) details overburden salvage and reclamation material stockpiling. Stockpiling best management practices (see Section 10.4 of Appendix 9-B) are listed and state 'Clearly mark stockpile locations and reclamation material types and ensure that personnel are aware of their presence to prevent inadvertent contamination, burial, or removal.'		CSFN	ERM		Rolf - Peter	RT	Ready for Submission	RT: June 26	Ready for Publishing
484	Chapter 4: Reclamation and Closure Plan	Reclamation and Closure of Above Water Beaches in TSFs – Cover Materials	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 4.7.4 of Chapter 4 of the Application describes the closure prescription that will be applied to above water tailings beaches as being comprised of: 1) subaerial slurry deposition of approximately 30 cm of a combination of NAG waste rock and OVB; 2) placement of a growth medium cover of OVB that is approximately 70 cm thick; and 3) placement of 30 cm of mixed-plant-material that will be "placed by truck and dozer, dumped, and spread" over the surface. Given the broad range of materials that may be classified as OVB, the fact that not all OVB materials readily lend themselves to being blended with NAG and deposited via slurry, or for use as growth media, the general assessment that a "surplus" of OVB materials will exist, and further that these materials will be placed in the Lower Waste Stockpile, a clear path showing how required quantities of the various material types required to implement this reclamation prescription has not been demonstrated. Section 4.7.4 goes on to indicate that this cover would only be placed if the TSF beach is trafficable by heavy equipment, or that the application of soil on tailings beach surfaces could potentially foul a membrane WTP. While it is true that both of these conditions could theoretically exist and that further testing (reclamation, geochemical, and cover design) are required, this reviewer notes that their existence would suggest in one instance that proper tailings deposition practices were not followed (in the instance of a non-trafficable above water beach), and failure to adequately design and install a cover system that would actually enhance overall management of water quality associated with the TSFs (in the case of potentially fouling a membrane WTP). Consequently, it is recommended that the OMS manuals that will be developed for TSF C and TSF D ensure that proper tailings deposition practices are followed that would enable reclamation of above water beaches as indicated in Figure 4.2-1. In other words, contrary	The OMS manual that will be developed for the TSF will discuss recommended tailings deposition practices to achieve the operating objectives for the facility. The OMS manual will speak to the need to regularly review and adjust tailings deposition practices, as the facility shifts towards the end of its operating life, and the Closure phase approaches. The intent of making this connection in the OMS manual is to highlight that planning is needed in order to achieve the closure objectives for the TSF, in particular to have above-water tailings beaches that are developed so that they can have a cover applied and reclaimed per the closure design (Figure 4.2-1). Figure 4.2-2 provides the locations of the surficial soil salvage areas and Table 4.2-4 provides the reclamation-materials volumes (by reclamation material). The locations and volumes of the reclamation materials required to implement the proposed cover of above water tailings beaches will be clearly specified in future updates of the RCP. The RCP is required to be updated each 5 years under the MA permit, so volumes and types of these materials will be updated as well to reflect the actual stockpiles materials, and any revisions to the closure concept, and thus potential changes to the needs of said stockpiled materials. Any salvage plan related to the storage and preservation of reclamation media will demonstrate how required quantities of each material type will be preserved and remain accessible for verification of quantity and quality throughout the mine life. Further information can be found in the Appendix 9-B Soil Management Plan.		CSFN	ERM		Rolf	RT	Ready for Submission	RT: June 28	Ready for Publishing
485	Chapter 4: Reclamation and Closure Plan	Reclamation and Closure of Above Water Beaches in TSFs – OMS	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The OMS documents that will be developed for each TSF should specify not only how above water tailings beaches will be sustained but also how their progressive development into the desired closure configuration will be monitored and assessed over the mine's life. (Source Comment ID#52)	Monitoring and operational requirements related to the TSF are summarized in Section 9 of Appendix 3-K of the Application. Preliminary QPOs related to the initial construction and operations of TSF C with the goal of managing freeboard, facility capacity, and embankment stability were developed. Final QPOs will be established after construction and summarized in the Operations, Maintenance and Surveillance (OMS) Manual. QPOs are selected to enable a high-level comparative assessment with the performance objectives for the TSF and must be reviewed annually and revised as required along with the OMS Manual to remain current during on-going construction of the TSF. The OMS Manual will incorporate requirements for TSF D once it is constructed.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing

486	Chapter 4: Reclamation and Closure Plan	Reclamation and Closure of Above Water Beaches in TSFs – Cover Design Assessment	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Planning for post closure water quality should include assessment of the impact and potential considerations associated with a designed cover comprised of the materials proposed in Section 4.7.4. This assessment should demonstrate effective collaboration and interfacing between a B.C. registered P.Eng specializing in tailings cover design and a B.C. registered P. Geo, specializing in the assessment of long-term water quality of mine wastes with and without an engineered cover. Specifications about how exposed above water tailings could be reclaimed while not undermining function of a membrane WTP should also be developed. (Source Comment ID#53)	The WTP has a circuit for metals and TSS removal upstream of the membrane unit for protection against fouling. Furthermore, BW Gold will be dosing antiscalant to mitigate fouling on the membrane. Some fouling is expected over time, and for that BW Gold will be performing regular CIP cleans to maintain performance.		CSFN	Lorax	BWG	Georges	GM	Ready for Submission	GM, June 18	Ready for Publishing
487	Chapter 4: Reclamation and Closure Plan	Maintaining and Re-establishing Pit Stratification	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	The Application must detail the management plans to allow for reliance on pit stratification being achieved. Should pit filling occur before or following full mine buildout, discharges into the pit must be engineered at depth or in such a way that promotes stratification to occur. Closure commitments must be defined that require BW Gold to maintain stratification to the extent possible and re-establish stratification if it is lost. A mitigation plan and effects assessment are required in case water quality impacts are significant to Davidson Creek from pit discharge in the case of early or premature closure. Recommendation: Please include in the Application an assessment of the case of early closure and the stratification assumption, as the depth of the pit may not allow for stratification to develop. A mitigation plan and effects assessment are required in case water quality impacts are significant to Davidson Creek from pit discharge in the case of early or premature closure (Source Comment ID#54)	Please refer to Comment response #411.		CSFN	Lorax	ERM/KP		GM	Ready for Submission	TD, Jun 28	Ready for Publishing
487	Chapter 4: Reclamation and Closure Plan	Maintaining and Re-establishing Pit Stratification	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Information Request	No	The two-cell pit lake water balance/water quality model update memo dated July 14, 2022 describes how permanent water column stratification (meromixis) is anticipated to occur within the pit lake during the Project post closure phase. However, as depicted in Figures 1 and 2 of the update memo, the pit lake will only contain brine after recycling it from the membrane water treatment plant after ~100 years of post closure. Yet, water treatment from all the contributing sources must continue, except the brine reporting back to the WTP from the pit lake will be of significantly worse quality. It is unclear what the plan is afterwards and whether managing the water in the proposed fashion for almost a century will leave options for management and treatment required in perpetuity. Beyond stating that 100 years is a long time and plans can be made, no other plans are provided for water management. This makes it impossible to define the appropriate and necessary Closure and Post Closure commitments. Information Request: Please describe what, if any, plans exist that ensure negative environmental impacts of the storing water in the pit are mitigated and monitored effectively throughout the entire LOM. After 100 years, the pit lake will be full of brine with no room for storage. It is not clear what plans BW Gold is referring to that can be developed in 100 years, but not now, such that the management of water is clear and there are minimum uncertainties for how the contaminated water will be managed in perpetuity to minimize environmental impact. See comment #57 (ITT ID 490) for more commentary on this topic.	In response to Round 3 Comment 411(c), a work plan is under development that will support alternate long-term mitigation strategies for pit lake water quality. This plan will be provided to reviewers once available and is anticipated to address the information request by the reviewer in this comment. In the interim, the membrane WTP vendor has conducted additional work to evaluate treatment capacity for sulfate in the Post-Closure phase after the entire pit volume is composed of brine. The preliminary results of this work suggest the treatment plant could continue to treat sulfate in the "brine lake" for an additional 300 years until the treatment efficiency is no longer feasible. Sulfate was selected for this analysis as a key limiting parameter This analysis will be considered within the plan submitted in response to Round 3 Comment 411(c) amongst other mitigation strategies identified by BW Gold. For the information Request, BWG acknowledges the Request and will provide a memo addressing the Request. (R3_CSFN_Comment ID 487.pdf)		CSFN	Lorax	BQE			Ready for Submission	GM; Sept 15	Ready for Publishing
487	Chapter 4: Reclamation and Closure Plan	Maintaining and Re-establishing Pit Stratification	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up	Recommendation	No	To be addressed through ITT ID 490	Please refer to the forthcoming response that will be provided for Round 4 Comment 490.		CSFN	Lorax						
487	Chapter 4: Reclamation and Closure Plan	Maintaining and Re-establishing Pit Stratification	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommendation	No	While the work completed by BQE Water demonstrates that the deteriorating water quality in the pit 300 years into the Post Closure phase will not result in exceedances against MDMER/BCWQG, as assumed for the exercise, the water quality in the pit lake keeps getting worse over time and so the treated water quality and the WQG are expected to be exceeded at some point in the future although not clear exactly when. CSFNs communicated previously in comment ITT ID 490 that this approach is unacceptable. MMO Reclamation Security Policy describes the overarching objective of mine reclamation is to return disturbed land to a state that achieves the desired end land use goals and a state of physical and geochemical stability, a self-sustaining state. Moreover, BW Gold committed to equilibrium modelling and stratified pit lake with a freshwater lens during the EA. The expectations are always that a mine design, planning, and reclamation ensure that dependence on active water management and treatment is reduced over time. The proposed water management strategy for the Post Closure phase (V13e) results in progressive deterioration of the pit water quality with ever increasing demand and risk of water treatment in perpetuity. CSFN strongly recommends WB/WQ models are updated to achieve the state of equilibrium and water management strategies are revised to focus on mitigation measures rather than treatment in perpetuity to address the lack of stratification in the pit lake and management of brine to avoid deteriorating pit lake water quality. This is regardless of the timeframe proposed for duration of Post Closure. Although WTP effluent is shown to meet MDMER/BCWQG in the receiving environment, the treatment objectives for the water treatment plant must be set based on the maximum capacity of the downstream receiving environment. Specifically for sulphate, the most stringent treatment targets appear to be required to meet the Class 1 standards in the Nechako Reservoir. As such, it is recommended that these limits are identified and if different from MDMER/BCWQG, considered in WQ models and water treatment requirements. From a fundamental perspective, the accumulation of sulphate in the pit lake is due to the presence of sodium ions because sulphate is balanced by calcium caps at gypsum solubility in the brine and as such can be removed from the overall system as solid gypsum during brine treatment. Considering that the predominant source of sodium at the site is from chemical reagents used during mining and processing, continuing contributions of sodium loading to the water quality are expected to decline over time. It is counterintuitive that the V13e modelling results show continually increasing sulphate and sodium concentrations in the pit lake	The reviewer's comment and recommendations are acknowledged. In response to Round 3 Comment 411(c), a Work Plan has been submitted by BW Gold to reviewers to derive alternate long-term mitigation strategies for pit lake water quality with the overarching goal of ultimately reducing the Project's reliance on long-term active treatment. It is anticipated that analyses proposed as part of the Work Plan will address several of the reviewer's concerns noted in this comment. The request to extend the model timeline to equilibrium (steady-state) conditions is noted and will be incorporated as applicable in Work Plan modelling exercises. The primary source of ammonia release in post closure originates from TSF seepage. This ammonia is sourced primarily from reagent usage, and concentrations will decline in the long term as this load is rinsed out of the TSF. However, significant reductions of ammonia in seepage concentrations due to flushing will require an extended period of time, owing to the modest seepage rates (2 Mm3/year) and large volume (180 Mm3) of pore water contained within the interior of the TSF. Within the saturated pore space of the TSF, ammonia is expected to remain relatively stable. The sub-oxic conditions will promote ammonia stability and biological uptake would be limited to anaerobic bacteria consuming residual organic carbon present in the interior of the TSF. Ammonia released as TSF seepage will be concentrated as brine and discharged to the bottom waters of a meromictic pit lake. Within the pit lake a portion of the ammonia may be oxidized or consumed by biological uptake. The degree of ammonia oxidation and biological uptake within the pit lake bottom waters would depend on the turbidity and depth of the surface water layer which will vary over time, as well as nutrient (i.e., phosphorous) availability. For these reasons, ammonia is assumed to remain stable as a model conservatism. Work Plan reference: Lorax Environmental Services Ltd. (Lorax). 2022. Technical Memorandum: Response to Round 3 Comment 411(c). Prepared for BW Gold Ltd. October 10, 2022. File ID: R3_EMLI Comment ID 411c.pdf		CSFN	Lorax	BWG (GM, RT)			28-Oct-22	GM; Nov 1	Ready for Publishing

488	Chapter 4: Reclamation and Closure Plan	Contingency Plans for Water Treatment in Closure/Post-closure	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Recommendation	No	Water treatment is a crucial aspect of Closure and Post-closure reclamation and requires contingency planning to ensure success. The Application must include contingency planning for these periods to lower the risk of treatment failure/shutdown and non-compliance. These plans and measures can include duplicate installation of critical systems as well as maintaining an inventory of spare parts. Similarly, increasing the plant capacity to treat more water creates an offset for when no water can be treated if the plant is shut down. Recommendation: Please include in the Application detailed contingency plans for water treatment in Closure/Post-closure. (Source Comment ID#55)	Detailed contingency planning for water treatment failure/shutdown and non-compliance for the Closure and Post-closure phases is beyond the scope of the joint application. Despite this, the following contingencies could be implemented if the WTP is shut down/fails: •Leave a nominal volume of water in the ECD. The ECD pond will be managed with a minimum volume of water in the pond. Water can accumulate in storage for short periods if required. The available storage in the ECD pond is 194,000 m3. •Direct water to the pit lake. More than 50 Mm3 storage capacity exists in the open pit above the Post-Closure target pit lake elevation as a result of maintaining the pit lake as a groundwater sink in Post-Closure. BW Gold will also evaluate the possibility of warehousing critical spare equipment parts locally as the mine moved from Operations into Closure and Post-closure. These same contingencies could be implemented in the event that off-spec water is produced by the WTP (i.e..., non-compliances).		CSFN	BQE		V. Sundar	GM	Ready for Submission	RT; June 29	Ready for Publishing
488	Chapter 4: Reclamation and Closure Plan	Contingency Plans for Water Treatment in Closure/Post-closure	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Thank you for the response. To resolve this comment, please include a discussion of these contingencies and the focus on local resources for Closure/Post Closure in the Application. (Source Comment ID#55)	Detailed contingency planning for water treatment failure/shutdown and non-compliance for the Closure and Post-closure phases is beyond the scope of the joint application. Despite this, the following contingencies could be implemented if the WTP is shut down/fails: • Leave a nominal volume of water in the ECD. The ECD pond will be managed with a minimum volume of water in the pond. Water can accumulate in storage for short periods if required. The available storage in the ECD pond is 194,000 m3. • Direct water to the pit lake. More than 50 Mm3 storage capacity exists in the open pit above the Post-Closure target pit lake elevation as a result of maintaining the pit lake as a groundwater sink in Post-Closure. BW Gold will also evaluate the possibility of warehousing critical spare equipment parts locally as the mine moved from Operations into Closure and Post-closure. These same contingencies could be implemented in the event that off-spec water is produced by the WTP (i.e..., non-compliances). We would also refer the responder to our round 2 response to comment #602 and the associated deliverable: *Reference: Knight Piésold Ltd (KP). 2022. Blackwater Gold Project - Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization. Included as an attachment to BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"*		CSFN	BWG		Travis	TD	MId-September	TD, Sept 23	Ready for Publishing
489	Chapter 4: Reclamation and Closure Plan	Formatting of the Cost Estimation Spreadsheet	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	The formatting of the spreadsheet provided for the Reclamation and Closure Cost estimate is very difficult to follow. This document still primarily follows the format that was presented to CSFN representatives during a meeting with Artemis and ERM consultants which resulted in much confusion. Recommendation: Please arrange for a meeting where BW Gold explains the results and methods of calculations. CSFN may incorporate additional comments in the future upon meeting with BW Gold representatives to explain the details included in the document. (Source Comment ID#56)	BW Gold will arrange a meeting with the CSFN to go over the costing spreadsheet.		CSFN	ERM		Rolf	AT	Ready for Submission		Ready for Publishing
489	Chapter 4: Reclamation and Closure Plan	Formatting of the Cost Estimation Spreadsheet	CSFN - F. Mohamm	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	The comment will remain open until the spreadsheet for the Reclamation Closure Cost estimate is better formatted and easier to follow. (Source Comment ID#56)	Thank you for your comment. A meeting has been scheduled for October 5th with all First Nations, EMLI, Artemis and ERM to review the updated Reclamation Liability Cost Sheets		CSFN	ERM		Rolf	AT	Ready for Submission	TD, Sept 14	Ready for Publishing
489	Chapter 4: Reclamation and Closure Plan	Formatting of the Cost Estimation Spreadsheet	CSFN - F. Mohamm	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Oct 10, 2022	3	Follow Up		No	Comment will remain open until the updated cost estimate has been reviewed. (Source Comment ID#56)	A Reclamation Liability Cost Sheet was submitted to all First Nations and EMLI on October 13, 2022. A meeting has been scheduled for October 31st with all First Nations, EMLI, Artemis and ERM to review the updated Reclamation Liability Cost Estimate. The cost estimate spreadsheet files have been revised and intended to be more efficient for reviewers.		CSFN	ERM		Rolf		Ready for Submission	TD, Oct 19	Ready for Publishing
490	Chapter 4: Reclamation and Closure Plan	Water Quality Exceedances in Closure and Post-closure	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	According to the Reclamation and Closure Cost Estimate (RCCE) the project components that are active in the Closure phase for the Year +23 LoM do not include water treatment. However, water quality in the receiving environment during the closure phase exceeds BCWQG frequently. Moreover, and despite the operation of the membrane WTP in Post-closure, water quality exceedances occur frequently during this phase as well. These exceedances must be addressed, which would necessitate the implementation and operation of additional mitigation and treatment measures. None of this information is available now and as such the RCCE provided inherently provides a gross underestimation. Recommendation: Please describe how these exceedances will be addressed including additional mitigation and treatment measures that might be necessary to implement. These costs must be accounted for in the RCCE. (Source Comment ID#57)	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-Closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information, including optimized water management proposed for the Closure and Post Closure phases to mitigate previously-predicted BC WQG exceedances in the receiving environment. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		CSFN	Lorax	ERM	Meghan/??	GM	Ready for Submission	TD, Jun 28	Ready for Publishing

490	Chapter 4: Reclamation and Closure Plan	Water Quality Exceedances in Closure and Post-closure	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Recommendation/Information Request	No	See 220822 Source Round 2 Detailed Comments on the Revised Blackwater Major Works Application (Batch 2C) Recommendation: BW Gold should revisit the WQ/WBM and extend the modeling timeframe to the point when equilibrium conditions are reached in the pit lake. If the duration to equilibrium is many decades, it is recommended that additional mitigations or alternative methods of treating/handling brine are integrated into the project so that water treatment demands do not continually escalate over time. Information Request: The updated WQ/WB model indicates that levels of ammonia in the pit are expected to increase significantly over time, reaching >10 mg/L N after 100 years. This seems counterintuitive, as ammonia addition to the water balance should cease when blasting/cyanide is no longer used at site and ammonia degrades over time from sunlight and biological activity. Was ammonia degradation in the pit modeled similar to how it was modeled in the TSF? (Source Comment ID#57)	The comment presents one Recommendation and one Information Request. A response to each is presented below. For the Recommendation: In response to Round 3 Comment 411(c), a work plan is under development that will support alternate long-term mitigation strategies for pit lake water quality. This plan will be provided to reviewers once available and is anticipated to address the recommendation provided in this comment. It is anticipated this plan will identify additional WB/WQM scenarios that will be extended until pit equilibrium conditions are reached, as appropropriate. For the Information Request: Ammonia and other nitrogen species were treated conservatively in the model outside of the TSF C and TSF D ponds. The primary source of NH3 in Post Closure originates from TSF seepage, which is then concentrated into the brine being discharged into the mine pit. Ammonia within the interior of the TSF is expected to be relatively stable, with minimal decay over time. This reservoir will gradually be rinsed out of the facility, which is not considered in the tailings seepage source term predictions which use constant ammonia concentrations over time. Ammonia disposed in the pit lake will degrade through oxidation and biological uptake. These reactions were not incorporated into the WQM as a model conservatism		CSFN	Lorax				Ready for Submission	GM; Sept 15	Ready for Publishing
490	Chapter 4: Reclamation and Closure Plan	Water Quality Exceedances in Closure and Post-closure	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Oct 10, 2022	3	Follow Up	Information Request	No	BW's response to our recommendation for alternate long-term mitigation strategies for management of pit lake water quality is acknowledged. CSFNs look forward to reviewing BW Gold's workplan and expect that the alternate strategies will result in significantly reduced environmental concerns and liabilities and more importantly not in perpetuity. This comment remains open until receiving and reviewing the outcomes of BW Gold's workplan. With respect to modelling assumptions for ammonia sources and sinks and thus concentration in the pit, is there evidence to support ammonia from TSF will last longer than the duration of the modelling work? This same concern must be crucially addressed for sodium and consequently the rising sulphate concentrations in the pit lake. It is understood that conservatism is a necessity for all models, but the assumption of unlimited sources for ammonia and sodium is simply a false assumption rather than a degree of conservatism. Such an assumption may not necessarily result in false predictions in other cases, but could in the case of the Blackwater project where the limited capacity of the receiving environment and the nature of the water treatment process together result in a significant proportion of the contaminants remaining within the battery limits of the mine. Therefore, if contaminants are assumed to be introduced into the balance in perpetuity, the concentrations are naturally expected to rise. It is crucial to CSFNs' rights and interests to understand and evaluate actual concerns rather than artifacts of modeling work. Information request: Please share with CSFNs, for review and comment, the workplan referred to in this response as being in development for alternate long-term mitigation strategies for the management of pit lake water quality. Information Request: All assumptions built into the WQ modelling work must be carefully reviewed and if possible, verified through analogue site information before updating the WQ models, evaluating additional scenarios, and especially devising alternative management strategies. This specifically includes sources and sinks for sodium and nitrogen species. (Source Comment ID#57)	Regarding the first Information Request, BW Gold Ltd. provided the Review Comment 411c Work Plan to MMO on October 10, 2022, for distribution to the Mine Review Committee. For reference, the full Work Plan reference is included at the end of this response. Assumptions built into the model will be routinely updated and evaluated as model updates occur. In general, it is not possible to evaluate all assumptions against an analogue. All source terms, water inputs, and general model assumptions are based on site-specific empirical data where possible, for which analogues may not be available or appropriate. Analogue mine data from a number of mines is incorporated into the geochemical source terms and water quality predictions (Section 2.9 of Geochemical Source Term Report). This data was used to support degradation of nitrogen species in the TSF pond (Section 3.7 of the Geochemical Source Term Report), which included T-CN and WAD-CN losses, cyanate conversion to ammonia, and subsequent ammonia decay. Outside of the TSF pond ammonia was assumed to behave conservatively, the rational for which is described in the R3 Comment 487 response. As noted in the R3 Comment 487 response, the Work Plan submitted in response to Review Comment 411c (Lorax 2022) will evaluate alternative management strategies, particularly in the Post-Closure phase. Lorax Environmental Services Ltd. (Lorax). 2022. Technical Memorandum: Response to Round 3 Comment 411(c). Prepared for BW Gold Ltd. October 10, 2022. File ID: R3_EMLI Comment ID 411c.pdf		CSFN	Lorax				28-Oct-22	GM; Nov 1	Ready for Publishing
490	Chapter 4: Reclamation and Closure Plan	Water Quality Exceedances in Closure and Post-closure	CSFN - F. Mohamm, P.Littlejohn	Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up	Information Request	No	The overarching assumption made in the existing Workplan is that it is ok to advance without a reasonable solution at sight. The ever-increasing concentration of contaminants and TDS in the pit is a significant concern to the environment and the Nations and must be resolved through a technically feasible solution, irrespective of costs and implementation/operation challenges before a permit can be issued and a Workplan commenced. Specifically, the first near term activity currently listed in the Workplan must be completed as a pre-requisite to the Workplan, which is to "identify if there is a preferred alternative treatment option for post-closure (excluding reverse osmosis or nano-filtration)". The main concern here is that if the answer to this question is "No" and a technical solution cannot be devised, it is not clear how the long-term risks to the environment and the Nations can be mitigated/managed. Permit conditions and other activities stated in the Workplan can be implemented based on Project requirements and priorities to ensure the best solution can be implemented in a cost-effective manner but a solution to this issue must be identified as early as possible. Considering the water quality predictions, one potentially feasible solution to the long-term concentration of contaminants and TDS in the pit could be to increase water treatment capacity as required and pair with existing metals/gypsum removal to maintain a steady concentration of contaminants in the pit that must be back calculated based on the capacity of the receiving environment. This option along with any other potentially feasible solutions that BW Gold can envisage	BWG has been informed that the comment is being re-written		CSFN	Lorax				TBD		

490	Chapter 4: Reclamation and Closure Plan	Water Quality Exceedances in Closure and Post-closure	CSFN - F. Mohamm, P.Littlejohn	Lorax Environmental Services Ltd.	Jan 12, 2022	5	Follow Up	Recommended Permit Condition	Yes	Thank you for the additional work and information provided in BQE's memo of Nov 22, 2022 in response to ENV information request and our meeting on December 19, 2022. BQE estimates that if SO4 and N are assumed to have finite quantities, TSF seepage quality will improve, to a degree that membrane treatment for sulphate will no longer be required, at around 176 years in post closure (it is understood, the exact timing of this occurrence is difficult to estimate). The reduced sulphate loads combined with the dilution from the plunge pool are expected to achieve compliance for sulphate. Therefore, it is acknowledged that effluent quality will eventually meet treatment targets, without membrane treatment after an estimated 176-year period. It is also understood that treatment for metals removal will likely continue in perpetuity due to the ongoing pit wall source term., Additionally, pit discharge quality is expected to rely heavily on precipitation regardless of the relative sizes of the catchment areas. This will need to be carefully evaluated by updating the WQM to include best estimate assumptions for sources/sinks a key step in de-risking the project. However, CSFNs remain concerned that the water quality liability has not been adequately addressed. The proposed effluent quality management approach in post-closure still relies on storage of the contaminant salts in the pit for many decades, if not centuries, and requires long term operation of the membrane water treatment plant. Operating the membrane treatment plant for a period of 200 years is a costly and potentially, increasingly complex process. As such, removal of the contaminant salts must be prioritized and evaluated in the near term, for potential implementation early in the project life. Salt precipitation methods that may be perceived unfeasible or costly could become the preferred choice of treatment if applied early in the project life to avoid decades of costly membrane treatment during post-closure. This is in addition to brine volume management activities that although important, are of lower priority in comparison. Early removal of salts may prove to be less costly for BW Gold in the long run and serve to reduce environmental risk for CSFN's rights and interests. Recommended Permit Condition: Additional consultation will be required to the feasibility study of seepage quality												
491	Chapter 4: Reclamation and Closure Plan	Costing for the LGO Liability in the Closure Bond	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	[Please see comment #58 in the source doc for additional context] Information Request: Please update the cost estimate for moving LGO back into the pit using the information provided and requested in this comment. Based on Source's calculations and after fixing the presumed erroneous assumptions, the bond requirement for LGO using the fleet proposed by Artemis would be on the order of ~$250M as opposed to ~$130M as calculated by Artemis. (Source Comment ID#58)	The inclusion of stockpile rehandling costs into the RLCE was discussed with EMLI and Indigenous groups on Thursday, June 17th, 2022. The Year 3 RLCE will be updated to include an estimate for rehandling the stockpiled material contained within the stockpile at the end of year 3 of operations.		CSFN	BWG		Alastair	TD	Ready for Submission	AT, June 20	Ready for Publishing
491	Chapter 4: Reclamation and Closure Plan	Costing for the LGO Liability in the Closure Bond	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	As discussed during the meeting of June 17, 2022, the updated RLCE must include a clear strategy for rehandling the stockpile and the LGO rehandling cost calculations must include the rationale for the assumptions made. Information Request: The updated RLCE should capture the LOM liability for the LGO pile. Please state the strategy for rehandling the LGO clearly and respond to the initial comment to provide the details requested and the rationale for the assumptions made for the movement of LGO. Please include details on distance, haul times, loading and dumping locations and any specific requirements or constraints. (Source Comment ID#58)	The updated RLCE will capture the closure cost liability for the mine, including the LGO pile, in accordance with EMLI guidance. The strategy for closing the LGO stockpile will be clear. If the plan is for the LGO to be rehandled, details on distance, haul times, loading and dumping locations and any other specific requirements or constraints will be provided.		CSFN	BWG				Ready for Submission	AT, Aug31	Ready for Publishing
491	Chapter 4: Reclamation and Closure Plan	Costing for the LGO Liability in the Closure	CSFN - F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up		No	Comment remains open until the updated RLCE and LGO rehandling strategy have been reviewed. (Source Comment ID#58)	The comment is acknowledged. BW Gold submitted to EMLI for distribution to the MRC an update to its proposed RLCE on October 13th. BW Gold looks forward to continuing to discuss with CSFN and EMLI its LGO bonding strategy through upcoming trilateral meetings (the next tentatively scheduled for Oct 31) to explain our rationale and cost basis, including rehandling costs for the maximum LGO pile volume in the reclamation and closure cost estimate.		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing
492	Chapter 4: Reclamation and Closure Plan	Reference Costs for Membrane Treatment of Mine Impacted Water	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd and Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Information Requirement	Yes	The references provided in the Application for membrane application for mine impacted water treatment are limited to pilot scale. Membrane operation in such conditions is associated with a high degree of fouling that although may be reduced by various means of descaling, require frequent maintenance and replacement. This not only increases the operating costs directly but also more importantly decreases the plant availability and treatment capacity. Information Request: Please use operations and maintenance costs as well as plant availability references from comparable full-scale membrane treatment systems and conditions to verify the assumptions. (Source Comment ID#59)	Large scale membrane applications are relatively new in the mining industry and there are many site-specific factors that influence availability and operating and maintenance costs. Development of cleaning and membrane replacement frequencies used in plant sizing and operating cost estimates for Blackwater was developed from test work on similar mine waters and represents a very conservative estimate, with both of these aspects being more frequent than membrane vendor recommendations.		CSFN	ERM	BQE	Rolf	RT	Ready for Submission	GM; June 14	Ready for Publishing
492	Chapter 4: Reclamation and Closure Plan	Reference Costs for Membrane Treatment of Mine Impacted Water	CSFN - F. Mohamm	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Recommended Permit Condition	Yes	Water treatment is an important aspect of all stages of mine life for the Blackwater Project. Considering that the project is to use an innovative membrane approach to water treatment, there is uncertainty on how the system will perform long term. Two permit conditions are recommended below to address this uncertainty. Recommended Permit Condition: It is recommended that annual reporting include discussion of water treatment performance in terms of effluent quality, throughput, and operability and that this topic be the subject of an annual review meeting. This annual review should generate information needed to inform an updated operating cost and performance estimate for the Membrane WTP. Recommended Permit Condition: Twelve months prior to the 5-year closure update, conduct an analysis of actual costs of the membrane water treatment plant and for use in the first reclamation closure cost estimate update. Recommendation: As discussed in the response, application of membranes for water treatment is relatively new in the mining industry. As such, vendor recommendations and standards for cleaning and replacement frequencies may not represent the best frame of reference. Source requests that BW Gold review lessons learned from reference sites in the development of the Membrane WTP OMS, including the Emalahleni facility (Hutton et al. 2009), https://www.imwa.info/docs/imwa_2009/IMWA2009_Hutton.pdf). (Source Comment ID#59)	Response to Recommended Permit condition 1: The comment is acknoweledged as a recommendation to EMLI, and BW Gold looks forward to discussing at the appropriate time (ie., during condition development). Response to Recommended Permit condition 2: The comment is acknoweledged as a recommendation to EMLI, and BW Gold looks forward to discussing at the appropriate time (ie., during condition development). Response to Recommendation: Based on the expected Blackwater Project timing, BQE Water expects to have designed/commissioned three or more full scale membrane-based water treatment plants at mine sites. BQE Water has reviewed the Emalahleni facility lessons learned report and will incorporate outcomes from this document, as well as lessons learned from other membrane plants we are responsible for, into the design, planning and OMS for the Blackwater membrane treatment plants.		CSFN	BWG				Ready for Submission	RT; aug 30	Ready for Publishing
492	Chapter 4: Reclamation and Closure Plan	Reference Costs for Membrane Treatment of Mine Impacted	CSFN - F. Mohamm	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	CSFNs appreciate BW Gold's response and direction to BQE to review and incorporate lessons learned from relevant membrane operations. This comment will remain unresolved until the discussion of permit conditions. (Source Comment ID#59)	This comment is acknowledged.		CSFN	BWG		Travis			TD, Oct 17	Ready for Publishing

493	Chapter 4: Reclamation and Closure Plan	Reclamation Closure Cost Update Program	CSFN	Rolf Schmitt, P Geo. ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	The Blackwater project will increase in level of disturbance and environmental liability over time, increasing future reclamation and closure needs. It is important that a robust process for updating the mine plan, reclamation and closure plan and the associated reclamation security cost estimate be incorporated into any future project permit. BC's policy is that closure plans and associated cost estimates be updated every 5 years. Based on Source's experience on other projects, this policy is not always followed. Recommendation: The process of updating these plans should involve at minimum the following: •Review the design basis and appropriateness of planned mitigation measures (i.e.. placement of covers, water management/treatment, revegetation) to ensure that they have been designed to a sufficient level of detail to allow evaluation of their suitability, whether or not they are achievable, and to develop a reasonable cost estimate •Updates to water balance/water quality models that incorporate actual site monitoring data including updates to MLARD/geochemical characterization, site water quality, treatment performance, reagent/explosive usage, disturbed volumes of material, material availability for covers, and climate •Unit costs for material movement (i.e.. cover placement) should be reviewed and revised using the BC Blue Book. This review should account for the location of material currently stored, its destination and equipment required to move it •Major consumable costs for long term water treatment should be updated based on vendor quotes •Future capital costs should be revised to account for inflation via use of the Industrial Products Price Index Given the level of interconnectedness between these plans and the level of effort required to develop, review and integrate them, it is recommended that discussion of reclamation closure planning and associated reclamation security cost estimation start a year in advance of the 5-year update timeline. A hard deadline is required for the end of each 5-year cycle. (Source Comment ID#60)	With regards to the first two recommendation: Section 4.10.10 (Adaptive Management Framework) indicates how the effectiveness of management measures will be reviewed at least on a minimum 5-year interval. Updates to the water balance/water quality models to include operations data will be completed at minimum every 5 years as part of adaptive management to inform updates and improvements to the Reclamation and Closure Plan. With regards to the costing recommendations: As stated in Section 4.13 'At the time of plan updates, the closure cost estimate is re-examined and adjusted to reflect the existing and planned disturbance, activities, and liabilities on the site'. BW Gold acknowledges the recommendation to provide the next iteration of the Reclamation and Closure Plan on a hard deadline at the end of the 5-year cycle and will work to achieving this.		CSFN	ERM		Rolf - Peter	RT	Ready for Submission	RT: June 26	Ready for Publishing
494	Chapter 5: Modelling, Mitigation and Discharges	Simulated POC Concentrations	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Simulated POC concentrations in the Application must include diagrams or tables that present the contribution of each source at model nodes. This data should also integrate seasonally-derived loading distributions. Sensitivity scenarios should include both mitigated and unmitigated conditions. (Source Comment ID#61)	Included as standard output for base case water quality model runs and sensitivities are the following: 1) high level screenings of the results for receiving stream nodes against guidelines/SPOS, with results summarized as both number/factor of exceedance per station and Project phase; 2) summary tables tallying monthly mean and P95 predictions per mine site/receiving stream node, by Project phase; 3) time-series plots showing predicted concentrations for mine site and receiving stream nodes screened against applicable guidelines; and 4) plots show time-varying predicted load signatures for key model nodes and parameters of concern.		CSFN	Lorax		John, Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
495	Chapter 5: Modelling, Mitigation and	Seepage to Creek 705	CSFN	Cindy Starzyk, Ph.D., P.Eng.;	Jun 02, 2022	1	New	Information Requirement	Yes	The Application must include measures to prevent seepage to Creek 705. Measures include a seepage recovery sump associated with the west side of the TSF within the Davidson Creek watershed designed to redirecting seepage to the TSF, as well as a freshwater pond constructed upstream of the TSF to create a hydraulic barrier for the Site C West Dam seepage. The Application must provide details on	The seepage control measures for the West Dam to prevent seepage to Creek 705 are described in Section 5.5 of Appendix 3-K of the Application. Details related to the Phase 2 Central Water Transfer Pond are described in Section 7.3.9 of Appendix 3-K. The design report and site characterization reports (Appendix 3-L) indicate that additional site investigations are required in the first several years of mine operations to inform		CSFN	KP		Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
496	Chapter 5: Modelling, Mitigation and Discharges	Storage of Residues	CSFN	Dan Fontaine, P.Eng.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	Yes	During operations, water treatment residue from the metals removal WTP and the LGO lime neutralization WTP is to be commingled and deposited with tailings. During C&M, tailings will not be generated, so alternative disposal management methods are required. The residue generated by these processes is unstable in acidic conditions, which could develop without proper upfront planning. Clarification: Please clarify how treatment residue will be managed during C&M. Will the same tailings conveyance infrastructure that is suitable for moving tailings and WTP residue to the TSF during operations be suitable for moving only residue during C&M? Moving solid slurry in a very oversized line risks sanding out the line. (Source Comment ID#63)	The management of treatment residue for the various Care & Maintenance scenarios, as outlined in response to comment #441, will be included in the updated C & M Plan being developed. See response to comment #441 for more information.		CSFN	KP	BWG	Cindy/Dan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
496	Chapter 5: Modelling, Mitigation and Discharges	Storage of Residues	CSFN - P. Littlejohn	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#63)	Refer to response to comment #441.		CSFN	BWG		Travis	TD	Ready for Submission	TD, Aug 30	Ready for Publishing
497	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Palmer	Jun 02, 2022	1	New	Recommendation	No	The proposed plan to pump from Tatelkuz Lake to augment Davidson Creek streamflow to meet Instream Flow Needs (IFN) will reduce streamflow along the reach of Chedakuz Creek downstream from the lake outlet and upstream from the Davidson Creek confluence. The Water Balance Model Report (Appendix 5-B) included a model node along this reach, named 15-CC. According to Table E3.4 in the Water Balance Model Report, on average, annual flow rate at 15-CC will be reduced by 8% compared to baseline. In an average year, February will experience the largest percent change (27% decrease from baseline), and May will see the lowest change (2% decrease from baseline). It is unclear whether there is potential for adverse effects on aquatic habitat in Chedakuz Creek (at 15-CC) during drier than average years when the Fresh Water Supply System (FWSS) pumps from Tatelkuz Lake to Davidson Creek. Recommendation: Develop monthly IFN values for Chedakuz Creek at 15-CC. (Source Comment ID#64)	Instream flow needs (IFN) were developed for Davidson Creek to maintain adequate streamflow to provide fish habitat. The IFN was developed for Davidson Creek due to the magnitude of anticipated flow changes that will result from mine operations. The anticipated magnitude of relative flow changes in Chedakuz Creek (at model node 15-CC) are less than in Davidson Creek due to the limited disturbance planned within the Chedakuz Creek catchment and the difference in watershed size. The Freshwater Supply System (FWSS) will provide a means of augmenting and managing streamflow in Davidson Creek to meet the IFN for that stream. There is no comparable water management infrastructure planned for Chedakuz Creek, so an IFN was not developed and its streamflow will continue to exhibit natural variability. The modelled 27% decrease in February flows (0.51 m^3 to 0.37 m^3) during late Operations (Year 22) presented in Table E3.4 is due to currently planned additional pumping from Tatelkuz Lake (Years 18 to 23), as the FWR will provide the freshwater requirements for the mill during this timeframe. Utilizing the FWR as the source of freshwater for the mill in later operations allows for an accelerated filling of the open pit to submerge exposed pit walls to prepare for site closure. BW Gold will use actual measured data on water management system performance during the Operations phase to establish a water allocation framework guiding site water management decisions to minimize water loss in Chedakuz Creek, while maintaining habitat in Davidson Creek and balancing the needs of geochemical mitigation at the mine site. This framework will involve continually updating its life of mine water balance with measured data, and may include reducing water withdrawals from Tatelkuz Lake during low flow periods such as the month of February and potentially increasing withdrawals during higher flow months to balance actively flooding the open pit against the potential for flow impacts downstream. Furthermore, IFN requirements during periods of reducing water withdrawals from Tatelkuz Lake could be met through treatment and release of water from the stockpiles and/or TSF as opposed to directing these water sources to the pit on a continuous basis starting in Year 18. This reduction during low flow months in water use will help limit any adverse effects on aquatic habitat in Chedakuz Creek during winter low flows.		CSFN	Palmer	ERM KP requested transfer to Palmer	Stefan Gronsdahl	AT/KP	Ready for Submission	TD, Jun 27	Ready for Publishing

497	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Palmer	Aug 08, 2022	2	Follow Up	Recommendation	Yes	Thank you for the model results from the Variable Climate Case (VCC). Table 1 from the Round 1 response memo demonstrates that under baseline conditions (i.e., the natural creek regime), Davidson Creek streamflow is lower than the proposed IFN in drier than average years. Therefore, it is reasonable to expect that IFN may not be met in drier than average years. During dry years, operators may need to be careful not to draw too much from Tatelkuz Lake to make up the IFN in Davidson Creek because the resulting flow reduction in Chedakuz Creek could cause stress to aquatic life. Recommendation: To fulfill this information request, one of the two following items must be completed: 1)Demonstrate that the Davidson Creek IFN can be met for all phases of mining for the range of hydrologic conditions in the VCC model by pumping from Tatelkuz Lake without causing stress to aquatic life in Chedakuz Creek. To do this, it is expected that BW develop a minimum allowable flow rate in Chedakuz Creek to maintain suitable conditions for aquatic life (similar to the IFN that was developed for Davison Creek) and show with model results that the Chedakuz Creek flow rate will stay above its minimum required flow rate while maintaining IFN in Davidson Creek. 2)If it is not possible to maintain IFN in Davidson Creek during dry years without causing stress in Chedakuz Creek, then pumping to Davidson Creek could be scaled down. A potential operational regime to follow would be to balance the pumping rate from Tatelkuz Lake so the flows in Davidson and Chedakuz Creeks correspond to about the same return period. Table 2 is a hypothetical lookup table an operator could use to balance flows between the two monitoring stations. For example, if total available streamflow (i.e., the sum of flows in Davidson and Chedakuz Creeks) was 0.3 m3/s, then 0.05 m3/s would go to Davidson Creek, leaving 0.25 m3/s in Chedakuz. In both creeks, the flow corresponds to a baseline 25-year low flow. Table 2 represents a single month. A complete table would be expanded to include 12 months. Flow values are hypothetical. Table 2.Example lookup table for concurrent flows in Davidson and Chedakuz Creeks during dry years. [see Source Doc} The reviewer is not looking for a commitment to ongoing modelling during operations. Instead, they would like to see an easy-to-understand protocol that the operators can follow to optimize the	During dry years to mitigate adverse effects to fish. Withdrawals will be balanced between meeting the Davidson Creek IFN to maintain habitat and meeting the needs for geochemical mitigation at the mine site. A decision making framework will be established for partitioning water between Davidson Creek and Chedakuz Creek during low flow periods such as the month of February. The framework will include thresholds for determining whether withdrawals from Tatelkuz Lake should be reduced or ceased, based on established guidance that is consistent with the BC Environmental Flow Needs (EFN) Policy. The BC Tennant Approach will be used to define mean annual discharge (MAD)-based flow thresholds that support the species and life stages that use Chedakuz Creek at relevant times of year. If flows were to drop below established thresholds, then withdrawals from Tatelkuz Lake would be reduced/cease, depending on the severity of low flows, to maintain EFN in Chedakuz Creek. During periods of reducing water withdrawals from Tatelkuz Lake, IFN requirements in Davidson Creek could be met through treatment and release of water from the stockpiles and/or TSF as opposed to directing these water sources to the pit on a continuous basis starting in Year 18. BW Gold's environmental compliance certificate - EAC-M19-01 has a condition 10 document submission plan which requires the development and provision of a Tatelkuz Lake Protection Plan 90 days prior to pumping water from Tatelkuz lake. BW proposes that this Tatelkuz lake Protection Plan will include describing the framework for managing water withdrawal from Tatelkuz Lake to balance flows in Davidson and Chedakuz creeks. The Plan will describe the MAD-based thresholds for Chedakuz Creek and the corresponding adaptive management process, including limiting or halting withdrawal from Tatelkuz Lake and other mine-site water management changes.BW Gold proposes that if required, EMLI can include that the plan also be submitted as a permit condition of the MA's permit to align and harmonize the EAC/MA permit req's on the same timeline.		CSFN	Palmer			TD	Ready for Submission	TD, Aug 16	Ready for Publishing
497	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN (Rob Griffith)	Palmer	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Thank you for the proposed commitment to include a framework to manage flow needs in Chedakuz Creek in the Tatelkuz Lake Protection Plan (TLPP). Recommended Permit Condition: The reviewer recommends EMLI include a permit condition which requires the development and provision of a TLPP prior to pumping water from Tatelkuz Lake. Minimum requirements of the plan are summarized under condition 31 of the EAC-M19-01. In addition to the EAC-M19-01 requirements, the TLPP shall include the following components: •Establish Environmental Flow Needs (EFN) for Chedakuz Creek. •A framework for partitioning water between Davidson Creek and Chedakuz Creek with the goal of meeting EFN in Chedakuz Creek and Instream Flow Needs (IFN) in Davidson Creek. The framework will include the scenario for dry years when EFN (Chedakuz Creek) and IFN (Davidson Creek) cannot be concurrently met. •Use a water balance model to demonstrate how the framework will be implemented. The model simulation should use Blackwater's climate variability scenario to evaluate system performance over the range of expected environmental conditions (i.e., wet/dry years). •Describe the monitoring system (e.g., stream gauging, lake level measurements) that operators will use to set pumping rates, and to monitor the performance of the system. (Source Comment ID#64)	BW Gold supports inclusion of a framework to manage flow needs in Chedakuz Creek in the Tatelkuz Lake Protection Plan (TLPP) prior to pumping water from Tatelkuz Lake, including: • Following the minimum requirements as summarized under condition 31 of the EAC-M19-01. • Establishing Environmental Flow Needs (EFN) for Chedakuz Creek. • Developing a framework for partitioning water between Davidson Creek and Chedakuz Creek with the goal of meeting EFN in Chedakuz Creek and Instream Flow Needs (IFN) in Davidson Creek. The partioning framework will include the scenario for dry years when EFN (Chedakuz Creek) and IFN (Davidson Creek) cannot be concurrently met. • Use of a water balance model to demonstrate how the framework will be implemented. • Description of the monitoring system (e.g., stream gauging, lake level measurements) that operators will use to set pumping rates, and to monitor the performance of the system.		CSFN	Palmer					GM; Oct 24	Ready for Publishing
498	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #64 in the source doc for additional context] Recommendation: Use the output from the water balance model, climate variability scenario, to evaluate whether IFN can be met in Davidson Creek and Chedakuz Creek (at 15-CC) for the range of modelled flows. (Source Comment ID#65)	Please see attachment "R1_CSFN Comment IDs 498 506 583.pdf".		CSFN	KP		Cindy/Stephanie	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
498	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Knight Piésold Ltd. and Palmer	Aug 08, 2022	2	Follow Up	Recommendation	No	[Please refer to the Round 2 comment under comment #64 of this memo.] Not Resolved please refer to Comment #497 in this ITT (Source Comment ID#65)	The output from the water balance model, climate variability scenario, will be used to develop the decision-making framework discussed in response to Comment 497 for partitioning water between Davidson Creek and Chedakuz Creek during low flow periods.		CSFN	KP	Palmer	Cindy	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
498	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN (Rob Griffith)	Knight Piésold Ltd. and Palmer	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Please refer to the Round 3 comment under comment #64 of this memo. (Source Comment ID#65)	BWG acknowledges this comment. Water balance modelling to develop the decision-making framework for partitioning water between Davidson Creek and Chedakuz Creek during low flow periods can be conducted prior to pumping water from Tatelkuz Lake.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, Oct 21	Ready for Publishing
499	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Palmer	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #64 in the source doc for additional context] Recommendation: It is reasonable to expect that in extreme dry years, IFN cannot be met in Davidson Creek and/or Chedakuz Creek. Define the rules that Blackwater will follow for FWSS pumping to minimize adverse effects on aquatic habitat on both watercourses if IFN is not achievable at one or both of Davidson Creek and Chedakuz Creek (15-CC). (Source Comment ID#66)	A Goldsim daily timestep site water balance will be implemented during Operations to incorporate ongoing monitoring of water management components (e.g., reservoir volumes, process water requirements, water treatment rates, climate data) and be coupled with assessment of available data on future water availability (e.g., snowpack measurement, precipitation measurement, weather forecasting) to inform water management decisions at site. When dry conditions or low flow periods are encountered or predicted, BW Gold will ensure that changes to treatment and discharge rates are implemented based on outputs from the Goldsim model to ensure water availability on site to reduce or limit the need for freshwater from the FWSS, ensure that PAG is saturated and that adequate process water supply is available in the TSF cells. BW Gold will consider methods to meet the IFN, including adjusting process water flows (e.g., adjusting rates of water treatment, pit dewatering, or ore processing water needs), or drawing down water from retention structures (e.g., the FWR) to provide supplemental flows. BW Gold will also consider the timing of sensitive life stages of fish (e.g., spawning, egg incubating) through consultation with Fisheries QP's when evaluating changes to water management strategies		CSFN	Palmer	KP KP requested transfer to Palmer	Stefan Gronsdahl	TD	Ready for Submission	TD, Jun 27 GM; June 27	Ready for Publishing

499	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Palmer	Aug 08, 2022	2	Follow Up	Recommendation	No	Please refer to the Round 2 comment under comment #64 of this memo. [The proposed plan to pump from Tatelkuz Lake to augment Davidson Creek streamflow to meet Instream Flow Needs (IFN) will reduce streamflow along the reach of Chedakuz Creek downstream from the lake outlet and upstream from the Davidson Creek confluence. The Water Balance Model Report (Appendix 5-B) included a model node along this reach, named 15-CC. According to Table E3.4 in the Water Balance Model Report, on average, annual flow rate at 15-CC will be reduced by 8% compared to baseline. In an average year, February will experience the largest percent change (27% decrease from baseline), and May will see the lowest change (2% decrease from baseline). It is unclear whether there is potential for adverse effects on aquatic habitat in Chedakuz Creek (at 15-CC) during drier than average years when the Fresh Water Supply System (FWSS) pumps from Tatelkuz Lake to Davidson Creek. (Source Comment ID#66)	The Tatelkuz Lake Protection Plan referred to in ITT Comment #497 (Source comment #64) will define the framework for FWSS pumping to minimize adverse effects on aquatic habitat in Chedakuz Creek and Davidson Creek during a variety of flow scenarios.		CSFN	Palmer			TD	Ready for Submission	TD, Aug 16	Ready for Publishing
499	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN (Rob Griffith)	Palmer	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Please refer to the Round 3 comment under comment #64 of this memo. (Source Comment ID#66)	BW Gold supports inclusion of a framework for FWSS pumping to minimize adverse effects on aquatic habitat in Chedakuz Creek and Davidson Creek during a variety of flow scenarios in the Tatelkuz Lake Protection Plan (TLPP).		CSFN	Palmer			TD		TD, Oct 24	Ready for Publishing
500	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Knight Piésold Ltd. and Palmer	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #64 in the source doc for additional context] Recommendation: Demonstrate that appropriate monitoring systems will be in place (hydrometric monitoring, pumping rate monitoring, storage volume monitoring) to implement the rules for FWSS pumping requested in comment #68. (Source Comment ID#67)	Flows are monitored in the FWR to track release of IFN releases into Davidson Creek. The FWR flow monitoring systems are described in the Water Management Structures Detailed Design Report (Appendix 3-O). The FWR outlet pipes will feed into a Temperature and Flow Control Chamber, and each pipe will be fitted with a main valve and maintenance valve with the ability to regulate flows according to water surface levels and IFN requirements. Ultrasonic flow meters will be installed on the pipes upstream of the outlet valves to accurately measure flows for compliance reporting requirements. Surface water level monitoring will be used to quantify the total volume in the reservoir and also to indicate when the spillway is being used. In addition, a hydrometric monitoring station downstream of the FWR can be used as a backup to confirm the IFN release. These flow and level monitoring instrumentation are to be used in conjunction to determine if any supplemental water is required from the FWSS to meet IFN and by how much. The FWSS Report (Appendix 3-P) describes the pumping system from Tatelkuz Lake. The objective of this system is to only provide additional flow when the IFN cannot be met by diversions and mine water management. The maximum IFN is 0.56 m3/s during the spring; the FWSS will draw water from Tatelkuz Lake through two pipes (for redundancy), which will passively convey water from the lake to a concrete wet well. The intake screen design basis assumption includes a 0.67 m3/s capacity for each screen. Three vertical turbine pumps within the pump station will provide a total maximum flowrate of 0.67 m3/s . Each of the pumps will be equipped with a variable frequency drive and motor to accommodate variable flow demand. As described in Section 3.5.6.7 of the Application, the design of the FWSS takes into consideration the requirements to provide variable and controlled flow from Tatelkuz Lake.		CSFN	KP	Palmer	Stefan Gronsdahl/Cindy	TD	Ready for Submission		Ready for Publishing
500	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Palmer	Aug 08, 2022	2	Follow Up	Recommendation	No	Please refer to the Round 2 comment under comment #64 of this memo. [The proposed plan to pump from Tatelkuz Lake to augment Davidson Creek streamflow to meet Instream Flow Needs (IFN) will reduce streamflow along the reach of Chedakuz Creek downstream from the lake outlet and upstream from the Davidson Creek confluence. The Water Balance Model Report (Appendix 5-B) included a model node along this reach, named 15-CC. According to Table E3.4 in the Water Balance Model Report, on average, annual flow rate at 15-CC will be reduced by 8% compared to baseline. In an average year, February will experience the largest percent change (27% decrease from baseline), and May will see the lowest change (2% decrease from baseline). It is unclear whether there is potential for adverse effects on aquatic habitat in Chedakuz Creek (at 15-CC) during drier than average years when the Fresh Water Supply System (FWSS) pumps from Tatelkuz Lake to Davidson Creek.] (Source Comment ID#67)	The Tatelkuz Lake Protection Plan ITT Comment #497 (Source comment #64) will include a description of the monitoring systems that will be in place to implement the framework for FWSS pumping, including details provided in the BW Gold Round 1 response for ITT Comment #500		CSFN	Palmer			TD	Ready for Submission	TD, Aug 16	Ready for Publishing
500	Chapter 5: Modelling, Mitigation and Discharges	IFN in Chedakuz Creek at 15-CC	CSFN	Palmer	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Please refer to the Round 3 comment under comment #64 of this memo. (Source Comment ID#67)	BW Gold supports inclusion of a description of the monitoring systems that will be in place to implement the framework for FWSS pumping in the Tatelkuz Lake Protection Plan (TLPP).		CSFN	Palmer			TD		TD, Oct 24	Ready for Publishing
501	Chapter 5: Modelling, Mitigation and Discharges	Reduction in Flow in Creek 661	CSFN	Palmer	Jun 02, 2022	1	New	Recommendation	No	In Section 5.3.5.2., Creek 661 (Node H11, H1, and 1-661) model results show a reduction in streamflow during late operations, closure, and post-closure phase. Average annual streamflow at H11 is predicted to decrease by 39% and 43% from baseline flows by the end of operations and post-closure, respectively. Model results for node 1-661, approximately 8 km downstream of node H11, show a reduction in average annual streamflow by 11% in late operations and post-closure. Section 6.3.4.4 states that Creek 661 was not evaluated for effects because modelled flow changes (from baseline) are less than 5%. Recommendation: Evaluate the effects of the modelled flow changes on aquatic life in Creek 661 provided in Table E3.3 of the Water Balance Model Report (Appendix 5-B). (Source Comment ID#68)	Potential impacts to aquatic habitat that will occur due to flow changes in Creek 661 at node 1-661 were quantified through the development of the Fisheries Act Authorization Application and were included in the habitat offsetting calculations. Refer to Figure 8-5, Table 8-8, and Section 8.4.2.2 of the application document.		CSFN	KP	KP requested transfer to Palmer	Stefan Gronsdahl	AT/KP	Ready for Submission	RT; June 14	Ready for Publishing
502	Chapter 5: Modelling, Mitigation and Discharges	Reduction in Flow in Creek 661	CSFN	Palmer	Jun 02, 2022	1	New	Recommendation	No	In Section 5.3.5.2., Creek 661 (Node H11, H1, and 1-661) model results show a reduction in streamflow during late operations, closure, and post-closure phase. Average annual streamflow at H11 is predicted to decrease by 39% and 43% from baseline flows by the end of operations and post-closure, respectively. Model results for node 1-661, approximately 8 km downstream of node H11, show a reduction in average annual streamflow by 11% in late operations and post-closure. Section 6.3.4.4 states that Creek 661 was not evaluated for effects because modelled flow changes (from baseline) are less than 5%. Recommendation: Yinka Dene Water Law states: “Waters within the traditional Territories of the Carrier Sekani First Nations should remain substantially unaltered in terms of water quality and flow.” If warranted by the results of the effects assessment, develop an appropriate mitigation or offsetting plan to address the expected changes in flows to Creek 661. (Source Comment ID#69)	Potential impacts to aquatic habitat that will occur due to flow changes in Creek 661 at node 1-661 were quantified through the development of the Fisheries Act Authorization Application and were included in the habitat offsetting calculations. Refer to Figure 8-5, Table 8-8, and Section 8.4.2.2 of the application document. BW Gold understands that Creek 661 is outside of the CSFNs’ territories and as such is not subject to the requirements of the YDWL.		CSFN	KP	ERM/BWG KP requested transfer to Palmer	Stefan Gronsdahl	AT/KP	Ready for Submission	RT; June 14	Ready for Publishing

503	Chapter 5: Modelling, Mitigation and Discharges	FWSS years 1 to 5	CSFN	Stephanie Eagen, R.P.Bio.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	The Water Balance Model Report states that there is a low likelihood (15% to 25% likelihood) that the Fresh Water Supply System (FWSS) from Tatelkuz Lake will be needed during the first five years of mining. The Water Management Plan (Appendix 9-E) states that the FWSS will be commissioned by Year 6. It is unclear whether a contingency plan is in place in the event that IFN cannot be met in Davidson Creek prior to Year 6. Recommendation: Incorporate a contingency (e.g., early construction of the FWSS) to the Adaptive Management Plan in the Water Management Plan for the scenario where IFN cannot be maintained prior to commissioning the FWSS in Year 6. Describe the trigger that will initiate the contingency plan. Describe the timeframe for implementation of the plan and demonstrate that IFN in Davidson Creek can be met with the plan in place. (Source Comment ID#70)	Contingencies to meet IFN during drier than average conditions during the first phase of operations without having available the supply of water from Tatelkuz Lake include: advancing pit dewatering rates for treatment and release during low flow periods, decreasing the use of fresh water from the WMP for mill operations by increasing reclaim water usage from the TSF, treating and releasing TSF supernatant water via the Operations phase membrane WTP. BW Gold is applying now for the authorization to construct and operate the FWSS, so that there are no regulatory constraints to build this part of the project, thus reducing the time to have the FWSS operating. See response to comment #499 for additional discussion on contingencies to address IFN needs in Davidson and Chedakuz Creeks.		CSFN	KP		Stephanie/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
504	Chapter 5: Modelling, Mitigation and Discharges	Tatelkuz Lake Water Level	CSFN	Palmer and Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	Yes	The FWSS will draw water from Tatelkuz Lake. It is unclear whether the pumping is expected to change the lake water surface elevation compared with baseline conditions. Recommendation: a)Using the water balance model, quantify the expected range in water levels in Tatelkuz Lake given the water balance inflows and outflows. Use the climate variability model for this evaluation. b)Compare the results from (a) with baseline conditions. c)Assess the effect of water level fluctuations on aquatic life. (Source Comment ID#71)	a) KP Water Balance Model update required for Tatelkuz Lake water balance. b) KP assessment of results vs. baseline required. c) Palmer can assess based on results of a & b. Long-term water withdrawl from Tatelkuz Lake is not predicted to have a significant effect on water surface elevation (i.e.., indistinguishable from natural variation) based on water modelling. Section 5.3.9..4.5 Reduction in Littoral Fish Habitat of Tatelkuz Lake of the EIS/Application states that "The magnitude of change is negligible to low, because some months will differ from mean baseline values, but will remain within range of natural variation. On average, water surface elevation of the lake fluctuates 0.8 m over a year, but the greatest change estimated to be caused by pumping 0.11 m from baseline conditions or 14% of the baseline range". Effects on littoral habitat in Tatelkuz Lake were not considered to have changed in the subsequent updated assessments (Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment, ERM September 2017). Conclusions presented in the Application/EIS are considered to be conservative, as water withdrawal from Tatelkuz Lake to augment flows in Davidson Creek will be decreased based on project design changes. Any potential changes in aquatic habitat will be monitored as part of the follow-up program for the CEAA Decision Statement Condition 3.16 pertaining to fish habitat in Tatelkuz Lake and Chedakuz Creek. A memo on this follow-up plan was submitted to Indigenous groups for review. Additionally, the provincial EAC Condition 31 Tatelkuz Lake Protection Plan mandates the development of a plan that will evaluate changes to flows and fish habitat in Tatelkuz Lake. BW Gold will develop this plan in consultation with First Nations and regulators.	sistance from	CSFN	Palmer			0	Ready for Submission	TD, Jun 28	Ready for Publishing
505	Chapter 5: Modelling, Mitigation and Discharges	IFN in Care and Maintenance	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	If the mine undergoes early closure, active management of Davidson Creek may be required to maintain IFN. Recommendation: Use the water balance model to simulate a protracted Care and Maintenance period following early closure to demonstrate how Davidson Creek IFN will be maintained. Use the climate variability model for this assessment to show how IFN will be managed over the modelled range of hydrologic conditions. (Source Comment ID#72)	Refer to response to comment #441.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
505	Chapter 5: Modelling, Mitigation and Discharges	IFN in Care and Maintenance	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	Thank you for the reference to the response to ITT comment #441. The reviewer looks forward to reviewing the care and maintenance model results for Davidson Creek and Chedakuz Creek when available. (Source Comment ID#72)	BW Gold presented the Care and Maintenance Model results to the CSFN on August 11th, 2022. BW Gold is preparing to send the updated Care and Maintenance Plan with associated results from this modelling exercise as part of responses received during the Round 2 comment period.		CSFN	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing

506	Chapter 5: Modelling, Mitigation and Discharges	IFN in Post-Closure	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Table E3.1 presents average monthly WBM results for Davidson Creek. Post-closure flows generally exceed the IFN values. However, during summer, predicted flows are only moderately above IFN. Modelled flow in June is slightly below IFN. Recommendation: a)Compare the WBM output from the climate variability model with IFN at H2B. b)Describe potential contingencies that could be implemented if IFN cannot be maintained in Davidson Creek in Post-Closure. (Source Comment ID#73)	Please see attachment "R1_CSFN Comment IDs 498 506 583.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
506	Chapter 5: Modelling, Mitigation and Discharges	IFN in Care and Maintenance	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 08, 2022	2	Follow Up	Recommendation	No	The memorandum "R1_CSFN Comment IDs 498 506 583.pdf" was reviewed. The VCC model results show H2B potentially not meeting the IFN in May, June, and July during Post-Closure. It is noted that additional monitoring will be conducted, and mitigations will be considered. However, meeting IFN is a requirement at all times and will likely be a crucial compliance point throughout all phases including Post-Closure. The federal Decision Statement condition 3.8 requires the Proponent to develop, prior to construction, measures to maintain flow needs in Davidson Creek. Please ensure preventative measures for scenarios where IFN cannot be maintained are developed. (Source Comment ID#73)	BWG acknowledges this comment. Preventative measures for scenarios where IFN cannot be maintained will be developed.		CSFN	KP		Cindy	TD	Ready for Submission	AT, Aug15	Ready for Publishing
506	Chapter 5: Modelling, Mitigation and Discharges	IFN in Care and Maintenance	CSFN (Martin Shin)	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Thank you for the proposed commitment to develop preventative measures for scenarios where IFN cannot be maintained. The reviewer looks forward to receiving documentation of the preventative measures. (Source Comment ID#73)	Preventative measures for scenarios where IFN cannot be maintained will be assessed and included as part of the process to update the water balance and water quality modelling to assess alternative Post-Closure water management and treatment strategies.		CSFN	KP		Cindy	AT/KP	Ready for BWG Review	KP, Nov 1	Ready for Publishing
507	Chapter 5: Modelling, Mitigation and Discharges	Construction Flow Diagram	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	In Section 5.3.2, conceptual flow diagrams (Fig. 5.3-5 to 5.3-10) are provided to depict how water will be managed on site throughout the mine life. Various water management activities are initiated in the construction phase, but a flow diagram was not provided for this phase. Recommendation: Provide a flow schematic for the construction phase. (Source Comment ID#74)	Please see attachment "R1_CSFN Comment IDs 507 584.pdf"		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
508	Chapter 5: Modelling, Mitigation and Discharges	Brine Management in C&M	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Clarification	No	During C&M, brine from WTPs needs to be directed somewhere. It is not clear if it is feasible to operate the water treatment plants with all brine being directed to the TSFs indefinitely in periods of C&M. It is possible that during periods of C&M other options will be required such as brine management in the open pit. The TDS level in the TSF would increase due to brine recirculation, as do the concentrations of contaminants that are not removed by brine treatment such as nitrogen species. Clarification: Please clarify what the impact of this increase in TDS would be on the restart of the mine? Are there any challenges that may potentially require alteration of water management or treatment strategies? (Source Comment ID#75)	Please refer to the response to Comment #441		CSFN	Lorax		Jen	GM	Ready for Submission	GM; June 28	Ready for Publishing
508	Chapter 5: Modelling, Mitigation and Discharges	Brine Management in C&M	CSFN - P. Littlejohn	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	See Round 2 response to comment #8 (ITT ID 441). (Source Comment ID#75)	Please see response to ITT ID 441.		CSFN	BWG		Travis	TD	Ready for Submission	RT; aug 30	Ready for Publishing
509	Chapter 5: Modelling, Mitigation and Discharges	Closure/Post-Closure Water Quality Exceedances	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	Yes	Figure 4-10 and Figure 4-14 of Appendix 5-D show water quality predictions for dissolved cadmium and total zinc in the receiving environment over the different mine phases. During closure and post closure, dissolved cadmium is expected to exceed both acute and chronic BC WQG in both the base case and 95th percentile case at WQ26-28. Total zinc is expected to exceed chronic BC WQG during the same span. The fact that Artemis is predicting this level of exceedance with the proposed project design is a major red flag – this indicates that the proposed mitigation measures are insufficient to protect the environment. It is not acceptable to permit a project that is expected to result in this level of exceedance in the receiving environment, even if exceedances are not expected until Closure/Post-Closure. Information Request: Please describe the sources/causes of contamination leading to these exceedances, delineating between the closure and post-closure phases and different sources, for example, treated water, uncaptured seepage, contact water that is deliberately released, TSF spillway, etc… Please comment on sources/causes of contamination from a modeling perspective, for example, key contaminant source terms that drive these exceedances. (Source Comment ID#76)	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Version 13e water quality predictions were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax 2022. Lorax Environmental Services Ltd. (Lorax). 2022. Water Balance/Water Quality Model Update. Prepared for BW Gold Ltd. by Lorax. June 30, 2022.		CSFN	Lorax		Jen	GM	Ready for Submission	GM; June 21	Ready for Publishing
510	Chapter 5: Modelling, Mitigation and Discharges	Closure/Post-Closure Water Quality Exceedances	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	[Please see comment #76 in the source doc for additional context] Recommendation: Further mitigations should be designed and implemented in order to prevent exceedances in the receiving environment in Closure/Post-Closure. These mitigations must be designed to a level of detail sufficient to allow costing and integration into the reclamation and closure security. (Source Comment ID#77)	Please refer to response to Comment 509		CSFN	Lorax		Jen	GM	Ready for Submission	GM; June 28	Ready for Publishing

510	Chapter 5: Modelling, Mitigation and Discharges	Closure/Post-Closure Water Quality Exceedances	CSFN	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Please refer to the response to comments #57 (ITT ID 490) and #76 (ITT ID 509). (Source Comment ID#77)	Please refer to the response to Comment #490 in this tracking table.		CSFN	Lorax				15-Sep-22	GM; Sept 15	Ready for Publishing
510	Chapter 5: Modelling, Mitigation and Discharges	Closure/Post-Closure Water Quality Exceedances	CSFN	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up		No	Please see the Round 3 comment under comment ID 490. (Source Comment ID#77)	Please refer to the response to Round 3 Comment #490 in this tracking table.		CSFN	Lorax					GM; Nov 1	Ready for Publishing
510	Chapter 5: Modelling, Mitigation and Discharges	Closure/Post-Closure Water Quality Exceedances	CSFN	Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up		No	To be addressed through ITT ID 490	Please refer to the forthcoming response that will be provided for Round 4 Comment 490.		CSFN	Lorax						
511	Chapter 5: Modelling, Mitigation and Discharges	Frequency of Membrane Cleaning/Flushing	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Information Requirement	No	Please discuss the rationale for the membrane WTP design basis of one membrane cleaning per week and one permeate flush per day. Are these estimates based on long term operation or projections from shorter term pilot data? (Source Comment ID#78)	Frequencies are conservative and based on pilot rinsing/cleaning frequencies during which no scaling was experienced. Design CIP cleaning frequencies are more frequent than recommended by membrane manufacturers who recommend CIP cleaning only when a decline in performance is experienced, rather than on a timed interval. Permeate flush frequencies are also more frequent than recommended by membrane manufacturers that recommend permeate flush only on plant shutdown. In practice, the cleaning frequency will be set at these highly conservative design frequencies and then adjusted based on observed operational performance of the plant.		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
511	Chapter 5: Modelling, Mitigation and Discharges	Frequency of Membrane Cleaning/Flushing	CSFN - P. Littlejohn	Veneil Sundar, Manager, Process Engineer; BQE Water	Aug 22, 2022	2	Follow Up	Recommended Permit Condition	Yes	Noted, thank you. The approach of CIP cleaning only when a decline in performance is experienced is suitable for certain kinds of contaminants but gypsum scaling has a tendency to get worse over time and not be resolved via cleaning. Permeate flushing is only typically part of membrane manufacturer recommendations for shutdown because most membrane manufacturers do not recommend use of membranes for waters with elevated potential for gypsum fouling. I agree with the approach of adjusting cleaning frequency based on plant performance and not on a preset timing, but nevertheless disagree with the assertion that these are highly conservative design frequencies given the uncertainty associated with the application. Recommended Permit Condition: I suggest that this uncertainty be captured in a permit condition around annual reporting requirements for the project. Cleaning frequency/actual plant throughput/membrane replacement rate should be discussed in annual reporting and the results should be used to inform updates to the closure plan & closure cost estimate. This could be incorporated into the recommended permit condition described in comment #59 (ITT ID 492). (Source Comment ID#78)	Based on the expected Blackwater Project timing, BQE Water expects to have designed/commissioned three or more full scale membrane-based water treatment plants at mine sites. BQE Water has reviewed the Emalahleni facility lessons learned report and will incorporate outcomes from this document, as well as lessons learned from other membrane plants we are responsible for, into the design, planning and OMS for the Blackwater membrane treatment plants.		CSFN	BQE		Travis	TD	Ready for Submission	TD, Aug 24	Ready for Publishing
512	Chapter 5: Modelling, Mitigation and Discharges	Frequency of Membrane Cleaning/Flushing	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Question	No	What is the significance of higher-than-expected cleaning/flushing requirements in terms of ability to manage excess water/process throughput, and cost? (Source Comment ID#79)	Higher-than-expected cleaning and flushing requirements will result in lower plant availability, because the membrane systems will be offline for cleaning for longer time periods. However, refer to comment ID #511--this scenario is highly unlikely.		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
513	Chapter 5: Modelling, Mitigation and Discharges	Frequency of Membrane Cleaning/Flushing	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Question	No	Is it reasonable to expect the same requirements for cleaning/flushing for both operations and post-closure phases in the context of different water quality/use of different types of membrane elements? The higher sulphate level during operations and tighter membrane weave (RO) implies greater cleaning requirements during operations than post-closure. (Source Comment ID#80)	Higher feed concentrations does not imply a greater cleaning requirement. The cleaning frequencies during WTP operation will be largely dictated by the need to remove scale on the surface of the membrane. Scaling potential is a product of the influent water chemistry, membrane system recovery and the use of antiscalant, relative to the saturation concentration of the constituents in the water. So, the increase in feed concentrations does not automatically result in increased cleaning frequency. Much of the cleaning requirements are dictated by experienced operators and close monitoring of the performance of the plant, which ensures that the plant is operated below scaling conditions, reducing the requirement for cleaning.		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
514	Chapter 5: Modelling, Mitigation and Discharges	Sensitivity Analysis on Membrane WTP Performance	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Question	No	Did Artemis conduct a sensitivity analysis on membrane WTP performance with respect to the amount of brine generated? (Source Comment ID#81)	BQE did not specifically conduct a membrane performance sensitivity with respect to the amount of brine generated. Current design basis is on 95th percentile influent concentrations. Lower influent concentrations will result in lower-than-designed brine volumes.		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 18	Ready for Publishing
515	Chapter 5: Modelling, Mitigation and Discharges	Sensitivity Analysis on Membrane WTP Performance	CSFN	Knight Piésold Ltd. and BQE Water	Jun 02, 2022	1	New	Question	Yes	How does the overall site water balance/ability of the membrane WTP to manage excess water change if the membrane recovery is 60% instead of 75%? (Source Comment ID#82)	The scenario in which this reduction in recovery would occur is only associated with an increase in feed water TDS values. Given that the design basis uses 95th percentile feed water quality, it is more likely that the plant will be able to operate at higher recoveries rather than lower. Notwithstanding this likelihood, a scenario with decreased membrane recovery was modelled. Results of the modelling suggest that a lower membrane recovery of 60% instead of the 75% as included in the water balance model presented in Appendix 5-B has the following implications to the water balance: 1) No implication during Operations, because the current Membrane WTP design (72/ L/s) is sufficient to maintain the TSF C Pond volume within a similar range as predicted with the base case modelling presented in Appendix 5-B. This result is achieved operating the Membrane WTP in Operations for only seven months of the year (April to October), consistent with the base case modelling predictions. Flexibility is built into the water management strategy, so that if required, the Membrane WTP could be operated for a longer period during Operations than the seven months specified in the model. 2) During Post-Closure, an increase in the Membrane WTP influent design rate of approximately 10 L/s could be required to accommodate the lower membrane recovery and additional brine volume directed to the pit lake if the Membrane WTP persistently operates at the lower membrane recovery. Fluctuations in the Membrane WTP recovery and generation of higher proportions of brine over a period of months to a year can be accommodated by the storage available in the pit lake.		CSFN	KP	BQE		AT/KP	Ready for Submission	KP, June 22	Ready for Publishing

516	Chapter 5: Modelling, Mitigation and Discharges	Sensitivity Analysis on Membrane WTP Performance	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Question	No	Is the same plant sufficient to manage excess water or would additional capacity be required if high recovery cannot be maintained? Recovery rate will depend to an extent on salt accumulation in the TSF and so recovery will likely decrease as the project progresses and TSF water quality evolves. (Source Comment ID#83)	During the operations phase, water treatment is only required for treating excess water, and the primary water management mechanism is through planned dam wall raises. Returned sulphate during operations will be offset by dilution from rainwater and other water accumulation. The design basis for contingency treatment during operation is 7 months per year. If additional capacity is required, then the operating season could be extended to increase the annual treatment capacity by up to ~71%.		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 21	Ready for Publishing
517	Chapter 5: Modelling, Mitigation and Discharges	Operations Phase Treatment of Retentate in Membrane WTP	CSFN	Veneil Sundar, Manager, Process Engineer; BQE Water	Jun 02, 2022	1	New	Question	No	Why does the operations phase Membrane WTP include treatment of retentate for metals with ferric/sulphide? Page 11 of Appendix 5-H states that "the retentate produced by the process does not require desaturation because it is recycled back to the TSF". If this is the case for sulphate, why is this not also true of heavy metals? (Source Comment ID#84)	This is an additional metals removal contingency measure (on concentrated retentate). The trace metal concentrations in the membrane feed are concentrated in the retentate. An additional metal removal step on the retentate provides another removal point for a more robust process. The removal of metals in this fashion differs from sulphate, since metal precipitates will settle out in the TSF compared with sulphate solids, which will re-dissolve.		CSFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
518	Chapter 5: Modelling, Mitigation and Discharges	Selenium Removal in Metals WTP	CSFN	Kareena Gill, M.Eng., P.Eng., Romick Bhatti, P.Eng.,, and Lynda Smithard, P.Eng.; McCue Engineering Contractors	Jun 02, 2022	1	New	Recommendation	No	Later in the mine life, water quality entering the Metals WTP is expected to contain elevated levels of selenium. Depending on its form, selenium can be removed from water through ferric co-precipitation. Selenite selenium is most effectively removed in this fashion. Recommendation: Consider addition of ferric iron in the first lower pH reactor of the metals removal system to aid with selenium removal. Selenite selenium is most effectively removed in this way at pH <5. (Source Comment ID#85)	Selenium removal is not considered in the Metals WTP design per discussions with BW Gold during design stages. The concentration of Selenium is believed to be based on the detection limit and assumed to have a high degree of conservatism. However, addition of ferric sulphate is included in WTP design as the first chemical injection step upstream of the first reactor chamber to aid in the precipitation of target parameters. If Selenium removal is required, the treatment process would have to be optimized/adjusted for it.		CSFN	McCue		Lynda Smithard	GM	Ready for Submission	GM; June 17	Ready for Publishing
519	Chapter 5: Modelling, Mitigation and Discharges	Sediment in Metals Removal Ponds	CSFN	Kareena Gill, M.Eng., P.Eng., Romick Bhatti, P.Eng.,, and Lynda Smithard, P.Eng.; McCue Engineering Contractors	Jun 02, 2022	1	New	Recommendation	No	The Inlet Surge Ponds described in Table 5.6-5 of Chapter 5 supply influent water to the Metals WTP. The working volumes of these ponds may be reduced over time owing to accumulation of sediment. Recommendation: Include monitoring of the working volume of these ponds over time and consider dredging (or other methods of removing accumulated solids) on a periodic basis.. (Source Comment ID#86)	The pond will be designed by a third party, such that dredging equipment can be utilized. Manual checks of sludge depth will be included as part of the Maintenance procedures and the O&M manual will be amended to include this. Moreover, the Metals Treatment Ponds are designed for flow homogenization and buffering only. If excessive sediment accumulation is observed through continuous monitoring, the implementation of sediment management upstream of the pond would be initiated.		CSFN	McCue		Lynda Smithard	GM	Ready for Submission	GM; June 17	Ready for Publishing
520	Chapter 5: Modelling, Mitigation and Discharges	Manganese Removal in Metals WTP	CSFN	Kareena Gill, M.Eng., P.Eng., Romick Bhatti, P.Eng.,, and Lynda Smithard, P.Eng.; McCue Engineering Contractors	Jun 02, 2022	1	New	Information Requirement	No	Manganese is expected to be elevated in the influent of the Metals WTP and require a significant amount of removal to achieve BC WQG at end of pipe. The 2021 bench test involved treatment of water from 1.2 mg/L to 0.36 mg/L as dissolved manganese. However, BC WQGs set limits on total manganese, not dissolved. The bench test used 20- and 1.5-micron filters to produce effluent – this is likely a higher degree of filtration than achievable in practice using multimedia filters. Information Request: Is the degree of total manganese removal required to meet BC WQG achievable by the system? Is reference site data where full-scale systems have demonstrated this level of treatment performance available? (Source Comment ID#87)	This degree of removal can be achieved by the chemical treatment and filtration steps included in the WTP design. The pH setpoints can be adjusted in the system and optimized to better target specific parameters of concern like Mn. In addition to multimedia filters, a 1-micron or 1.5-micron bag filter is also included in the process downstream of the multimedia filter as a final polishing step. During WTP detailed design, dissolved manganese (Mn) concentration was compared to the BC WQG for total Mn, because total Mn predicted concentrations for Years -1 to 17 were not available. To be consistent with the approach, dissolved Mn concentrations from bench testing were also compared to BC WQG for total Mn. In 2021 bench testing total Mn was reduced from 1.25 mg/L to 0.369 mg/L. This concentration is lower than the BC WQG (long-term) of 0.530 mg/L. We understand that significant reduction of Mn is required during the WTP operation. If total Mn is assumed to just comprise of available maximum dissolved concentration (18.69 mg/L for Phase 3), approximately 97% removal is required to meet the BC WQG. Moreover, one of our currently operating full-scale water treatment plants for a mine in BC, involving a similar treatment process, have demonstrated more than 97% removal for both total and dissolved Mn from the WTP influent. This data has been included in the data analysis and estimation results shown in the response to comment #424 (see above).		CSFN	McCue		Lynda Smithard	GM	Ready for Submission	GM; June 17	Ready for Publishing
521	Chapter 5: Modelling, Mitigation and Discharges	Baseline Watershed Model – Calibration	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	To predict flow rates, variables were calibrated in the watershed model. This is a standard practice; however, the calibration of the parameters should be well-defined and with typically observed ranges supported by additional evidence. The calibrated factors are presented in Table 4.1. It is understood that the two primary variables that are calibrated in the model include the k1 and k2 variables. Overall, the calibration appears adequate; however, an additional clarification is requested. Information Request: Please describe the initial values for all calibrated variables as well as the final values. (Source Comment ID#88)	Please see attachment "R1_CSFN Comment ID 521.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission	AT, June 21	Ready for Publishing

522	Chapter 5: Modelling, Mitigation and Discharges	Baseline Watershed Model – Calibration	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	To predict flow rates, variables were calibrated in the watershed model. This is a standard practice; however, the calibration of the parameters should be well-defined and with typically observed ranges supported by additional evidence. The calibrated factors are presented in Table 4.1. It is understood that the two primary variables that are calibrated in the model include the k1 and k2 variables. Overall, the calibration appears adequate; however, an additional clarification is requested. Discuss the non-uniqueness of the calibration and if it would be possible to reproduce the NSE and matched stream flows with a different set of calibrated variables. (Source Comment ID#89)	Taken in isolation, sets of parameter values in the watershed model can lead to non-uniqueness. However, the procedures employed to develop and calibrate the simulated flows against the observed flows reduces the non-uniqueness of the watershed model calibration. These procedures include: •Adjusting the precipitation, evaporation, and sublimation inputs and the best estimate of groundwater entering and leaving the catchment areas so that the calculated total volume of water passing the stream gauge is close to the measured volume over the calibration period (in this case up to eight years of data exist). This modelling refinement is displayed as a cumulative distribution plot. •Adjusting the groundwater recharge factors, discharge factors, and estimate of groundwater bypassing the surface water gauge factors to reproduce as closely as possible the low flow rates and streamflow distribution shape. This modelling work is displayed as the semi-log cumulative distribution plot. The lower flow portion of this plot is most representative of groundwater discharge. •Adjusting the factors controlling surface water detention and release (and likely short flow path groundwater) to better fit the middle portion of the semi-log cumulative distribution plot. •Reconsidering the appropriateness of all input parameters, initially assigned based on the understanding of site meteorology, hydrology and hydrogeology, given the results of the watershed modelling. •Reconsidering input parameters given upstream and downstream measured flows. Calibrating the model to several consecutive gauging station allows refinement toward the most likely onsite conditions. This check was possible for Davidson Creek where four gauging stations are located along the main drainage. •Examining the time history histogram of measured and calculated monthly stream flows to identify and understand anomalous results. The modeled flows for Davidson Creek are within expected bounds as are resulting input parameters. The very good hydrology data and hydrogeologic understanding based on surficial geology and drilling in the valley made this possible. The main exception is the orographic factors assigned to precipitation. Precipitation multipliers assigned to the sub-catchments in Davidson Creek increase with elevation; this increasing trend could have been overcome by increasing the orographic factor, but this would have resulted in an orographic factor outside the expected range and inconsistent with the calculated orographic factor based on data available at the Blackwater High and Blackwater Low climate stations. The other catchments that were modeled lacked the detail that was available for Davidson Creek with respect		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
523	Chapter 5: Modelling, Mitigation and Discharges	Watershed Model: Inflow and Outflow Assessment	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Proper assessment of flow rates and summation of these flows (inflow and outflow) and identification of balance of flow terms is an important parameter to evaluate in a watershed model. Table 5.2 lists a summary of the water balance components and includes runoff, groundwater recharge and groundwater discharge in the model. The total storage or unaccounted for discharge is not provided. Clarification: Please confirm if Table 5.2 in the watershed model represents total inflow and outflows related to each elevation band. (Source Comment ID#90)	Table 5.2 in the Baseline Watershed Model Report (Appendix A of Appendix 5-B), provides the components of the water balance in each modelled sub-catchment. Values in Table 5.2 represent average annual values. The values provided in the table that form the balance are "Net Precipitation = Surface Runoff + Groundwater Recharge". The water balance components are provided as average annual values and the change in storage is assumed to be zero for average annual conditions.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing
524	Chapter 5: Modelling, Mitigation and Discharges	Watershed Model: Inflow and Outflow Assessment	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Proper assessment of flow rates and summation of these flows (inflow and outflow) and identification of balance of flow terms is an important parameter to evaluate in a watershed model. Table 5.2 lists a summary of the water balance components and includes runoff, groundwater recharge and groundwater discharge in the model. The total storage or unaccounted for discharge is not provided. Clarification: The total groundwater discharged as a percentage of total recharge varies between 74% in Turtle Creek catchment and 94% in Davidson Creek. Is the difference lost to groundwater that discharges further downstream or to storage? (Source Comment ID#91)	In instances where less than 100% of the groundwater discharges within a sub-catchment, the difference is groundwater that flows to the next downstream sub-catchment. The amount of groundwater that flows to the next downstream sub-catchment is provided in Table 5.1 (in L/s) called "Groundwater Passing beneath Gauge".		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing
525	Chapter 5: Modelling, Mitigation and Discharges	Watershed Model: Groundwater Flow Assessment	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Table 5.1 summarizes the annual average simulated and surface water groundwater flow predicted in the watershed model. Clarification: Please clarify what groundwater passing beneath the gauge indicates in the context of the model? (Source Comment ID#92)	"Groundwater Passing beneath Gauge" in Table 5.1 represents the flow of water in the subsurface (as groundwater) to the next downstream modelled sub-catchment.		CSFN	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
526	Chapter 5: Modelling, Mitigation and Discharges	Watershed Model – Reference Stream Calibration	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	It is understood that there is no impact to Turtle Creek; however, given the LOM of the mine is substantial, Turtle Creek monitoring may be useful in terms of evaluating the impact of climate or other activities such as deforestation or fires on flow. The calibration presented for Turtle creek is limited to a small period and has the lowest correlation between modeled and observed monthly flows. Clarification: Did anything change in the Turtle Creek catchment that may have resulted in cumulative underestimates of flow prior to 2014 and overpredictions in 2018? Baseline average monthly flow comparisons were not provided for Turtle Creek. Is there a reason for this data gap? (Source Comment ID#93)	As discussed in Section 3.1 of the 2022 Hydrology and Water Temperature Baseline Report (Appendix 2-I), the H6 gauging station has been difficult to maintain. The station was vandalized in May of 2014 and was damaged again during construction in 2018. No discharge hydrograph data are available in 2019 or 2020 because the creek is suspected to have been impacted by beaver activity. A field reconnaissance was conducted in 2020 to find a potential new location to establish the station, however no definitive new location has been established for this station. Available measured streamflow data from the Project indicates that 2018 freshet occurred in May, however monthly mean measured flows are not available for May 2018 at station H6. Measured flows are also not available for the 2019 or 2020 freshet and summer periods. The absence of high flow data during the latter portion of the calibration period influences the appearance of the fit between modelled and measured flows shown on Figure D.1 of the Baseline Watershed Model Report. Baseline average monthly flow comparisons for Turtle Creek were not provided in Appendix B of the Life of Mine Water Balance Report (Appendix 5-B) because the streamflows are not predicted to change in the catchment attributed to mine development. The content of the report was focused on providing information related to activity in the catchments with predicted changes.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
527	Chapter 5: Modelling, Mitigation and Discharges	Source Term Report – Material Reporting	CSFN	Dan Fontaine, P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Waste rock will be used for construction of the dams along the upstream face and potentially other construction material. Clarification: Please clarify if this material will remain saturated through operations and closure for all scenarios. (Source Comment ID#94)	The TSF and water management designs presented in the Application include for progressive saturation of PAG/NAG3 waste rock deposited into each TSF during operations for all scenarios considered. The reclamation and closure plan includes consideration for maintaining PAG/NAG3 waste rock saturation following closure.		CSFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing

528	Chapter 5: Modelling, Mitigation and Discharges	Source Term Report – LGO Tailings Thickness in Cell D and Cover Requirements	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	TSF D will hold the majority of the waste rock after year 5 and will only contain tailings amounting to 3 years' worth of tailings deposition near the end of operations, primarily from LGO tailings. Clarification: Please clarify if the cover strategy for TSFs rely on oxygen depletion in the LGO tailings and the implications associated with the possibility that waste rock will remain exposed in Cell D at closure, particularly if LGO tailings are not mined. (Source Comment ID#95)	All PAG1, PAG2 and NAG3 waste rock will be stored under saturated conditions in the TSF in the long-term. PAG waste rock will be submerged within one year of placement and NAG3 waste rock will be submerged within five years. In addition to the tailings placed over the waste rock, the final configuration includes a slurried NAG waste rock and overburden cover surface across all PAG tailings. The cover will serve to reduce both net percolation and oxygen ingress into underlying PAG materials. The TSF cover design will be refined based on continued development of closure water management plans and reclamation research. Waste rock will not remain exposed in TSF D at closure.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 21	Ready for Publishing
528	Chapter 5: Modelling, Mitigation and Discharges	Source Term Report – LGO Tailings Thickness in Cell D and Cover Requirements	CSFN -K. Jones	Lorax Environmental Services; BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Please confirm if the tailings will be PAG. It is unlikely that a waste rock and overburden cover will prevent the development of ARD unless a saturated layer in the overburden is created to restrict oxygen ingress, or the cover is engineered. Further, the ore for the LGO tailings has been exposed for a prolonged period of time. It is unclear if it is possible for the LGO to develop acidic drainage in a timeframe shorter than a year (unless demonstrated otherwise). (Source Comment ID#95)	Yes, both mill tailings and LGO tailings are expected to be PAG. Chapter 4 - Section 4.7.4.1 Design and Construction explains that the NAG waste rock and OVB cover (approximately 30 cm) will be placed, most likely slurried (like tailings placed during operations). A growth medium cover of OVB (approximately 70 cm) overlain by 30 cm of mixed-parent-material surface will be placed by truck and dozer, dumped, and spread to cover the above-water beaches. The total depth of the cover is planned to be approximately 130 cm. The current cover design assumes the TSF beach will be trafficable by heavy equipment. In addition, if a membrane WTP is required at closure, soil application on and revegetation of the TSF surface may cause fouling of the treatment membrane, thus, revegetation may not be permitted (in which case surface soil would not be applied). The TSF cover design will be refined based on continued development of closure water management plans and reclamation research (Section 4.2.5.1, Vegetation and Cover Trials).		CSFN	Lorax	BWG			Ready for Submission	TD, Aug 25	Ready for Publishing
528	Chapter 5: Modelling, Mitigation and Discharges	Source Term Report – LGO Tailings Thickness in Cell D and Cover Requirements	CSFN -K. Jones	Lorax Environmental Services; BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	The cover commitments must be strengthened. The use of the term "most likely slurried" is not acceptable. The cover must be designed to restrict oxygen ingress and potentially infiltration to the extent possible such that PAG material does not oxidize and produce leachate that is not protective of the environment, within the context of the mine site. A detailed cover design program must be submitted by Dec 31st of the first year of operations. The cover design program must prescribe the following: •Timelines for the implementation of lab scale and field scale trail cover programs. •A complete discussion of the laboratory tests that will be completed. •A discussion of the need for oxygen ingress modelling. •Milestone events for the cover design program. •A discussion of temporary closure strategies to prevent oxidation of the PAG material. •A discussion of how source terms may be impacted by the design. Consistent with the response to ITT ID 437, the source terms must be updated in accordance with the cover design assumptions. (Source Comment ID#95)	BW Gold acknowledges the response.		CSFN	Lorax				GM; Oct 14	Ready for Publishing
529	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance – % Runoff and Infiltration	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Precipitation within the footprint of the upper and lower waste rock piles can either runoff overtop of the waste rock pile, infiltrate through the waste rock pile, or contribute to the wetting up of pore spaces within the waste rock pile. Each of these processes will have unique chemistries and, depending on storage assumption, this could impact the temporal distribution of water from the waste rock pile. Information Request: Please describe the amount of water that is lost to storage in the waste rock piles over time (if any) and describe why the percentage of runoff and infiltration of net precipitation for the upper and lower waste stockpiles varies. (Source Comment ID#96)	Water is held in storage in each of the stockpiles. The modelled total volume of water retained in the stockpile increases during years when the stockpile volume grows and decreases in years that material is removed from the stockpile. Average annual water balances for each mine year for the Upper and Lower Waste Stockpiles and Low-Grade Ore (LGO) Stockpile are provided in Appendix B of Appendix 3-N. The proportions of runoff and infiltration from the Lower and Upper Waste Stockpiles differs due to the different composition of the stockpiles: the Lower Waste Stockpile will consist of approximately 98-100% overburden and limited NAG4/5; the Upper Waste Stockpile will consist of 1/3 overburden and 2/3 NAG waste rock as indicated in Section 4.6 of Appendix 5-B Life of Mine Water Balance Model Report. The LGO Stockpile will be comprised of run-of-mine low grade ore. Stockpiles with higher proportions of waste rock (or run-of-mine low grade ore, in the case of the LGO Stockpile) compared to overburden are assumed to have lower runoff and higher infiltration to a stockpile.		CSFN	KP		Cindy	AT/KP	Ready for Submission	AT, June 08	Ready for Publishing
530	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – LGO Water	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The LGO stockpile is assumed to develop acidic drainage during operations. The acidic drainage can be captured by runoff and infiltration or stored within the pore spaces of the pile. Clarification: Please describe if the water/load stored within the LGO pile is expected to contribute to the water/load in the mill and confirm that the LGO supernatant source term account for this source. (Source Comment ID#97)	The treated LGO stockpile water is directed to the TSF pond and would therefore influence predictions in the pond. This water is then pumped to the mill. The process water source term uses the ROM and LGO supernatant chemistries as end members and weights these based on the ore processing schedule to produce the process water source term. A distinct LGO process water source term is developed, and described in Section 4.1.5 of the Source Term Report.		CSFN	KP	Lorax	Cindy/John	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
530	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – LGO Water	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	The question is related to LGO stockpile acidic drainage. To rephrase, please confirm the inflows from the LGO pile to the ponds/mill (as residual pore water) will not impact the pH of the pond and that during processing, any acidic process water contributions are minor and will be neutralized which will promote metal precipitation. (Source Comment ID#97)	The potential sources of acidity from the LGO are understood to be seepage and water soluble acidity associated with the LGO solids. Seepage from the LGO will be treated prior to discharge, mitigating any potential acidity from this source. LGO solids will be neutralized within the mill prior to discharge into the TSF. A pH of approx. 10.5 will be maintained through lime addition within the mill environment to support CN stability. As a result, the mill will neutralize any water soluble acidity associated with stockpiled LGO. For these reasons, ARD generated from LGO during operations is not expected to impact pond water pH.		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
531	Chapter 5: Modelling, Mitigation and Discharges	Watershed Model – Adequate Evaluation of Extreme Events	CSFN	Jaime Cathcart, Ph.D., P.Eng.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The highest flow rates in the dataset were observed in May 2018. The highest precipitation rate corresponds to a 1:50 year event. Typically, a 1:100 year precipitation rate are used to evaluate the risk of project and 7Q10 events are used to evaluate the prediction under low flow conditions in the receiving environment. Information Request: Please provide the predictions assuming 1:100 year events for the Watershed Model and provide clarification for where this information is provided or adequate justification for why it is not required. (Source Comment ID#98)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP		Cindy/Jaime	AT/KP	Ready for Submission		Ready for Publishing
532	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The wet period in the historic record that extends from 1990 to 1997 (Figure 5.1) consists of six wetter than average years, including a 1 in 50 year wet year. The water balance results suggest that wetter than average climate conditions occurring in Years 7 through 10 of Operations could require a different water management strategy than represented in the model to maintain the TSF C Pond within the seasonal inflow allowance and below the maximum normal operating pond volume (the nominal design volume combined with the seasonal inflow allowance). One contingency strategy referenced is pre-emptively pumping water to maintain storage capacity. Information Request: Provide the results for a 1:100 year wet scenario as well as storm duration events (if completed). (Source Comment ID#99)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission		Ready for Publishing

533	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet Events	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The wet period in the historic record that extends from 1990 to 1997 (Figure 5.1) consists of six wetter than average years, including a 1 in 50 year wet year. The water balance results suggest that wetter than average climate conditions occurring in Years 7 through 10 of Operations could require a different water management strategy than represented in the model to maintain the TSF C Pond within the seasonal inflow allowance and below the maximum normal operating pond volume (the nominal design volume combined with the seasonal inflow allowance). One contingency strategy referenced is pre-emptively pumping water to maintain storage capacity. Information Request: For the provided results for a 1:100 year wet scenario and storm duration events, can the WTP rate be increased to accommodate the referenced contingency measures (on pdf page 66) of the Water Balance report and will any flow by-pass the treatment system? (Source Comment ID#9100)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP	Lorax	Cindy/Colin	AT/KP	Ready for Submission		Ready for Publishing
533	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet Events	CSFN -K. Jones	BQE Water	Aug 22, 2022	2	Follow Up	Recommendation	No	A recommendation going forward will be to include one 1:100-year wet event in the time series for the VCC case and presenting the maximum scenario as well as the P95 scenario for all years modelled. The load to be treated in the wet scenario is likely to be overly conservative as it is applied as a concentration. Please confirm that water treatment will not result in reagents that may exceed during the months between Nov and March (period when the water treatment plant is not normally operational). (Source Comment ID#100)	All reagents will be automatically controlled based on treatment rate and pH, so the likelihood of overdosing would be low.		CSFN	Lorax	BQE			Ready for Submission	GM; Aug 30	Ready for Publishing
533	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet	CSFN -K. Jones	BQE Water	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: A permit condition is recommended, described in comment #4 of this memo.(Source Comment ID#100)	This comment is acknowledged. Please refer to the response provided in this ITT to Round 3 Comment #437.		CSFN	Lorax	BQE				GM; Oct 31	Ready for Publishing
534	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet Events	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The wet period in the historic record that extends from 1990 to 1997 (Figure 5.1) consists of six wetter than average years, including a 1 in 50 year wet year. The water balance results suggest that wetter than average climate conditions occurring in Years 7 through 10 of Operations could require a different water management strategy than represented in the model to maintain the TSF C Pond within the seasonal inflow allowance and below the maximum normal operating pond volume (the nominal design volume combined with the seasonal inflow allowance). One contingency strategy referenced is pre-emptively pumping water to maintain storage capacity. Information Request: For the provided results for a 1:100 year wet scenario and storm duration events, are the contingency measures, such as pre-emptively pumping water feasible, and have they been modelled? (Source Comment ID#101)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP	Lorax	Cindy/Colin	AT/KP	Ready for Submission		Ready for Publishing
535	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The P95 scenario in the water balance indicates that water treatment rates will be exceeded; however, excess storage capacity does exist on site. Information Request: Please provide the location of the results for the 1:100 year wet scenario and confirmed that there is sufficient storage capacity during wet years to manage the excess water from tailings ponds or other facilities in the event the excess water is unable to be treated. Confirm that the mine can manage water during all periods of mine life without exceeding water quality standards in the receiving environment during extreme wet events. (Source Comment ID#102)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP	Lorax	Cindy/Colin	AT/KP	Ready for Submission		Ready for Publishing
535	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet Events	CSFN -K. Jones	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	The response to this question indicates that the results of the VCC Model suggest that the volume of water that could require management is up to 120,000 m3 through Year 11, and up to 200,000 m3 in the later years of mining (95th percentile). Water is predicted to be held in the pit sump for one to two months before the WTP has capacity to treat the stored water. The Metals WTP influent rate is sufficient to treat the combined sources of water under average climate conditions. As it is understood, the 1:100 year event wet scenario was not applied during these years. It is unclear from this response if there is sufficient capacity to manage the water from the VCC case (maximum predictions) during this time (which may be lower than the 1:100 wet case). Clarification: Please clarify the water management strategies to manage up to 200,000 m3 of excess water. (Source Comment ID#102)	The Metals WTP Pond will function as an influent equalization pond with a storage volume of approximately 4,600 m3 until Year 4 and up to approximately 9,000 m3 thereafter. This pond is designed to accommodate steady inflows from the various pumping systems from the Lower Waste Stockpile Collection Pond, Open Pit dewatering system, including the pit sump and groundwater dewatering wells, and the Upper Waste Stockpile Collection Pond (beginning in approximately Year +11). The Lower Waste Stockpile Collection Pond (LWS CP), Upper Waste Stockpile Collection Pond (UWS CP), and pit sump will provide temporary storage water generated by flood events until the flows can be transferred to the Metals WTP Pond and treated at the Metals WTP. The flood storage capacity of the LWS CP is approximately 50,000 m3 as described in Sections 6.5 of Appendix 3-N of the Application and the capacity of the UWC CP is approximately 100,000 m3 as described in Section 6.4 of Appendix 3-Y of the Application. The temporary storage capacity in the pit sump will be dependent on the mining phase, but is expected to be substantial and is not considered to be a design constraint that would affect the design basis capacity of the Metals WTP Pond.		CSFN	KP		Cindy		Ready for Submission	AT, Aug 31	Ready for Publishing
535	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet	CSFN -K. Jones	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: A permit condition is recommended, described in comment #4 of this memo. (Source Comment ID#102)	Please see the response to Comment 437.		CSFN	KP		Cindy	AT/KP	Ready for Submission	GM; Oct 24	Ready for Publishing

536	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Wet	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	During closure / post-closure, water treatment capacity might be exceeded during some scenarios, with excess water redirected to the open pit. Clarification: Does the potential exist for water to be discharged from the open pit to the receiving environment during this time? (Source Comment ID#103)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
537	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Seepage from Stockpiles	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Table 3-26 in the Water Quality Model report indicates various seepage times from TSF C, TSF D and the Pit Lake to downstream locations based on Modflow results. Seepage from the LGO stockpiles is described as potentially 13% of the stockpile footprint could contribute to seepage to the WMP if it is able to flow past engineered line and underdrains according to the Modflow results. The drainage from the LGO stockpile is expected to be acidic and metal leaching and therefore a small seepage rate could contribute a large load to the receptor. It is understood that the LGO will be placed on a drained till cover; however, it is still possible that groundwater recharge beneath the stockpiles will occur during the period this material is stockpiled and develop a plume. The inflows and outflows to the water management pond are shown in Figure 3.27 of the Water Quality Modelling Report; however, the flow term associated with potential LGO seepage in Figure 3.27 was not immediately clear. Clarification: Was uncaptured seepage from the LGO considered in the water quality model and is it possible that a plume from each stockpile could discharge to the receiving environment during post-closure? (Source Comment ID#104)	During Operations, any potential uncaptured seepage would report to a surface drainage that flows to the WMP. Groundwater and surface water will be monitored (as discussed in the Mine Site Water and Discharge Monitoring and Management Plan in Appendix 9-E) during Operations to monitor for uncaptured seepage and additional mitigations will be applied as outlined in Table 10-1 (e.g. discontinuing pumping from the WMP, routing non-contact diversion water around the WMP to the FWR, initiating treatment at the Membrane WTP during winter months), if required. The LGO will be processed before the end of Operations and the LGO stockpile water management systems will be decommissioned and site reclaimed in Closure. Results of groundwater and surface water monitoring during Operations will inform closure planning and final decommissioning/reclamation requirements, therefore the likelihood of an inferred potential plume discharging from the stockpile during Post-closure is considered very unlikely.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
537	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Seepage from Stockpiles	CSFN -K. Jones	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Based on the response, it is assumed that seepage from the LGO stockpile was not considered. However, the response indicated that should seepage bypass the till layer, it will discharge to a drainage ditch and can be managed. Please confirm the understanding of the response is correct. Recommendation: It is understood that the initial groundwater model assumed that seepage from the LGO will be limited by an HDPE liner and a till layer; however, the current plan is to place the LGO on a till layer. If the current model does not consider seepage from the LGO, please consider updating the model going forward with this source, or confirm the loadings will be negligible using a loading calculation (either outside of the model or within the model) to assess the impact of potential seepage on the WMP. (Source Comment ID#104)	Yes, the reviewer's understanding of the response is correct. The numerical groundwater model presented in Appendix 5-F was used to assess the potential flow paths of seepage originating from the LGO stockpile if it was to bypass the engineered liner beneath the stockpile footprint. Results of the groundwater modelling were incorporated into a seepage sensitivity (upper bound) in the water balance model as described in Section 7.1 of Appendix 5-B of the Application. The water balance model seepage sensitivity was the basis for a water quality model sensitivity (Scenario 4) as described in Section 4.4 of the water quality model in Appendix 5-D of the Application.		CSFN	KP	Lorax	Cindy		Ready for Submission	AT, Aug 30	Ready for Publishing
538	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Dry Events	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The water balance report indicates there is a risk of the ponds drying up in the 5th percentile scenarios (assuming the driest year is 50%). Maintaining a water cover over rock and potentially tailings is a key mitigation strategy to reduce the potential for acid rock drainage and metal leaching. It is understood that diversions can be discharged to the facility based on the average diversion flow rates. Information Request: Provide the results for a 1:100 year dry scenario, particularly as it relates to exposing PAG material in the facilities or describe where this assessment has been completed. (Source Comment ID#105)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP	Lorax	Cindy/Colin	AT/KP	Ready for Submission		Ready for Publishing
538	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Dry Events	CSFN -K. Jones	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	The response does not provide the results from the minimum scenario. As it is understood, the minimum scenario would represent the 1:50 year dry year in the time series. Please clarify if the minimum results of the VCC scenario result in depleted pond volumes and how climate change and 1:100 dry years are expected to impact pond volumes. Note: The contingency measures discussed in the response to ITT comment ID 539 do appear adequate to manage pond volumes and therefore only a high-level confirmation of understanding and discussion is requested. (Source Comment ID#105)	The minimum (driest) condition generated with the VCC Model does not result in depleted TSF pond volumes. TSF C and D Pond volumes are maintained by allowing more water from the upgradient catchments to be directed onto the TSF than is simulated in the base case VCC Model and the sensitivity model presented in the Round 1 response to Comment ID#538 (KP, 2022). Runoff from catchments upgradient of the TSF are primarily directed around the TSF via the Northern and Southern Diversion Systems and collected in the WMP for discharge downstream. A minimum additional 2.5 Mm3 /yr water is available to contribute to the TSF in the driest modelled year of the base case VCC Model if the non-contact runoff from upgradient catchments is directed onto the TSF instead of around it. This minimum simulated annual volume of water that can be directed to the TSF based on all 40 iterations of the VCC Model is comprised of the following upgradient sources (5th percentile and average volumes also provided for reference): •0.8 Mm3/yr from the Northern Diversion System (5th percentile flow is 1 Mm3/yr and average annual flow is 1.8 Mm3/yr). •0.35 Mm3/yr from the Central Diversion System once the stockpile footprints are at maximum build out (5th percentile flow is 0.4 Mm3/yr and average annual flow is 1.1 Mm3/yr). •1.4 Mm3/yr from the natural drainage contributing to the WMP (5th percentile flow is 1.5 Mm3/yr and average annual flow is 2.9 Mm3/yr). This flow is in addition to flows contributing to the Northern and Southern Diversion Systems. A minimum nominal pond volume of at least 1 Mm3 can be maintained in TSF C and TSF D when water from these upgradient diverted areas are considered. In Closure and Post Closure, untreated water from the ECD, pit lake, and the Upper and Lower Waste Stockpiles could also be directed to injection wells screened in TSF waste rock to facilitate maintenance of a larger pond volume on the TSF surface by maintaining waste rock saturation, if required. Extreme dry conditions such as 1:100 year dry climate could necessitate that a greater volume of runoff from the upgradient catchment is diverted onto the TSF surface to maintain a minimum nominal pond volume. If extreme dry conditions occur during Closure, less water would be pumped from the TSF to the pit lake to facilitate pit filling. Future climate conditions, as discussed in Section 8.0 of Appendix 5 B, are predicted to include higher		CSFN	KP		Cindy	AT/KP	Ready for Submission	AT, Sept 06	Ready for Publishing
538	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Dry Events	CSFN -K. Jones	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: A permit condition is recommended, described in comment #4 of this memo. (Source Comment ID#105)	Please see the response to Comment 437.		CSFN	KP		Cindy	AT/KP	Ready for Submission	GM; Oct 24	Ready for Publishing

539	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance and Water Quality Model – Accounting for Extreme Dry Events	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The water balance report indicates there is a risk of the ponds drying up in the 5th percentile scenarios (assuming the driest year is 50%). Maintaining a water cover over rock and potentially tailings is a key mitigation strategy to reduce the potential for acid rock drainage and metal leaching. It is understood that diversions can be discharged to the facility based on the average diversion flow rates Information Request: Discuss the contingency measures in place for extreme dry events, particularly as they relate for the potential for the water within the diversions to maintain sufficient volumes of water to ensure PAG material maintains a water cover and for adequate flow to be maintained at all points within the downstream environment (including consideration for realistic pumping rates). (Source Comment ID#106)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission		Ready for Publishing
540	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance – Water Cover Depth	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	A water cover is typically an adequate barrier to significant oxygen ingress due to the limited solubility of oxygen in water. Standard practice has suggested as a rule of thumb that a 2 m water cover is a suitable depth. Information Request: Please confirm the location of the water table in the TSF and the saturation depth of waste rock during operations and closure. (Source Comment ID#107)	The water management strategy for the TSF is to maintain saturation of the waste rock and a pond on the surface of the TSF during Operations through Post-Closure. To achieve this, the water table in the TSF will rise commensurate with the waste rock placement such that the waste rock is saturated within one year of deposition in the TSF. In closure and post-closure, the supernatant pond will be maintained above the elevation of the waste rock. Similar comments were raised by EMLI (308, 316 & 389). Please see Please see attachment "R1_EMLI Geotech-Geoscience Comment IDs 308 316 389.pdf" for more explanation on this topic.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
540	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance – Water Cover Depth	CSFN -K. Jones	Dan Fontaine, P.Eng.; Knight Piésold Ltd. John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	Please confirm that the PAG material will be covered with a 1 m water cover or engineered cover that will prevent oxygen ingress to the extent possible, and that any potential oxidation is accounted for in the assessment. (Source Comment ID#107)	As stated in the R1 response, during the Operations phase, the water table in the TSF will rise commensurate with the waste rock placement such that the waste rock is saturated within one year of deposition in the TSF. Thus, during the Operations phase, there is no water cover over the PAG/NAG3 waste rock. During the Operations phase, some of the PAG tailings are covered by the supernatant pond; the depth of the pond varies within the TSF, and throughout the life of mine. A minimum depth is not listed as a design criteria. As noted in Section 4.7.4.1 of the Application, a cover is proposed over the surface of the TSF for the Closure and Post-Closure phases of the mine, as well as a supernatant pond over a portion of the TSF surface. Oxidation of exposed PAG material that is not yet saturated/covered is incorporated into the water quality model. PAG1 and PAG2 waste rock is assumed to become partially acidic when oxidizing prior to saturation/cover placement. Runoff from the unsaturated mine waste contributes loading to the tailings pond and a flushing load is also assumed to be released upon inundation of this material.		CSFN	KP	Lorax	Greg	GM	Ready for Submission	/; Aug 31/AT Sep	Ready for Publishing
540	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance – Water Cover Depth	CSFN -K. Jones	Dan Fontaine, P.Eng.; Knight Piésold Ltd. John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: The time that PAG rock can be exposed on site should be defined in the permit, as well as the minimum water depth over subaqueous deposited material that has been exposed for a defined period of time. The permit should prescribe the exposure times, the minimum depths, and how this will be tracked and recorded. This can be decided during the writing of the permit.(Source Comment ID#107)	BW Gold acknowledges the recommended permit condition and is open to discussing language related to this condition that is measureable and achievable.		CSFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
541	Chapter 5: Modelling, Mitigation and Discharges	LOM Water Balance – Water Taking	CSFN	Palmer	Jun 02, 2022	1	New	Information Requirement	No	The Blackwater mine requires significant water management during operations, closure and post-closure. Diverted flows are required for 100% of the FWR in some years to maintain flow requirements. Information Request: Please clarify how water taking is predicted to impact water levels in Tatelkuz Lake (potentially requiring a bathometric survey if Lake volume is assumed to remain constant in the model) and thus flows downstream in Chedakuz Creek. (Source Comment ID#108)	Long-term water withdrawl from Tatelkuz Lake is not predicted to have a significant effect on water surface elevation (i.e.., indistinguishable from natural variation) based on water modelling. Section 5.3.9..4.5 Reduction in Littoral Fish Habitat of Tatelkuz Lake of the EIS/Application states that "The magnitude of change is negligible to low, because some months will differ from mean baseline values, but will remain within range of natural variation. On average, water surface elevation of the lake fluctuates 0.8 m over a year, but the greatest change estimated to be caused by pumping 0.11 m from baseline conditions or 14% of the baseline range". Effects on littoral habitat in Tatelkuz Lake were not considered to have changed in the subsequent updated assessments (Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment, ERM September 2017). Conclusions presented in the Application/EIS are considered to be conservative, as water withdrawal from Tatelkuz Lake to augment flows in Davidson Creek will be decreased based on project design changes. Any potential changes in aquatic habitat will be monitored as part of the follow-up program for the CEAA Decision Statement Condition 3.16 pertaining to fish habitat in Tatelkuz Lake and Chedakuz Creek. A memo on this follow-up plan was submitted to Indigenous groups for review. Additionally, the provincial EAC Condition 31 Tatelkuz Lake Protection Plan mandates the development of a plan that will evaluate changes to flows and fish habitat in Tatelkuz Lake. BW Gold will develop this plan in consultation with First Nations and regulators.		CSFN	Palmer			0	Ready for Submission	TD, Jun 28	Ready for Publishing
542	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Term Development – Reduction of Oxygen Ingress	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Condition 33 of the Schedule B Table of Conditions states “the means by which the Holder will implement an oxygen-preventing barrier to cover waste rock, tailings and other mine by-products to prevent adverse effects from rock that is currently or potentially acid-generating or ML. The barrier may include coverage with additional tailings, water, or another mitigation measure that will be effective at limiting the potential for ML/ARD”. The water quality model report indicates that at closure, the tailings will be covered by overburden but does not describe how ingress of oxygen and/or water will be reduced by the placement of the cover. The source term for runoff and infiltration through the tailings has a sulphate concentration of 1.82 mg/L. Beach runoff during all years of operations is calculated to be 231 mg/L. Both concentrations assumed neutral pH leaching. It is unclear how the placement of an overburden cover will reduce oxygen ingress or infiltration of water to the tailings. Importantly, according to Figure 2.6, the pond volume in TSF C will be maintained by a spillway with a volume of 2,000,000 m3. This volume is significantly less than the pond volume maintained during operations. The pond volume in TSF D is expected to increase at year 2042 at 2,000,000 m3; however, the VCC cases shows periodic reductions of this pond volume to 0 m3. Information Requirement: Please describe the predicted water level within the tailings sands deposited in TSF C and D for all phases of mine life, particularly during closure, to ensure the water level does not drop with time and that tailings remain saturated. Describe how the placement of the cover will reduce oxygen ingress such that metal loadings are reduced and acidic drainage is prevented. (Source Comment ID#109)	(The EAC Condition 33 management plan and the requirements in the EAC condition itself is not applicable to the MW's MAEMA application.) If we can still address the comment, great but I included the wording at the top because Condition 33 is listed in the comment. TD, 15-Jun The water management strategy for the TSF is to maintain saturation of the waste rock and a pond on the surface of the TSF during Operations through Post-Closure. To achieve this, the water table in the TSF will be maintained above the elevation of the waste rock (Section 9.2 of Appendix 3-K). The cover will serve to reduce both net percolation and oxygen ingress into underlying PAG materials. The TSF cover design will be refined based on continued development of closure water management plans and reclamation research. In the event that LGO is not processed, PAG waste rock exposed in TSF D would require a water cover or dry cover to mitigate ARD potential.		CSFN	KP	Lorax		AT/KP	Ready for Submission	KP, June 22	Ready for Publishing

542	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Term Development – Reduction of Oxygen Ingress	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	The question is largely related to the acidic conditions developing in the tailings material at closure; however, the response largely referenced the waste rock. As it is understood, the source terms for the tailings assume neutral metal leaching. It is unclear why the tailings will not develop acidic drainage at closure if the tailings are unsaturated. A crushed waste rock and/or overburden cover cannot be relied upon to reduce oxygen ingress. Clarification: Will the tailings in the final year of closure be desulphurized, intimately mixed with lime to prevent ARD in the tailings material, or will some other measure be used to prevent this from occurring? (Source Comment ID#109)	The reclamation and Closure Plan (Ch 4 of Application) states that the final configuration of the TSF includes a slurried NAG waste rock and OVB cover surface across all PAG tailings. This cover will be approx. 30cm. Approx. 70cm of OVB overlain by 30 cm of mixed-parent-material surface will be placed on tailings beaches. The total depth of the cover is planned to be approx. 130 cm. The TSF cover design will be refined based on continued development of closure water management plans and reclamation research A draft plan (EAC Plan 33 - Mine Waste and Water Management Plan) was submitted April 28, and the final plan will be completed no later than 6 months after issuance of the Mines Act and EMA permits. Alternative closure designs (i.e., desulphurized tailings/NP additions) can be adressed as part of the EAC Plan 33 review process.		CSFN	Lorax	KP			Ready for Submission	GM; Sept 1	Ready for Publishing
542	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Term Development – Reduction of Oxygen Ingress	CSFN -K. Jones	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Please see the permit condition outlined in comment #95 of this memo. (Source Comment ID#109)	BW Gold acknowledges the response.		CSFN	Lorax					GM; Oct 24	Ready for Publishing
543	Chapter 5: Modelling, Mitigation and Discharges	LOW Water Balance, Water Quality Model – Incorporation of Water Management Activities	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The VCC water balance results indicate that water management contingency measures may be required for some scenarios. Some of these scenarios include water storage onsite prior to treatment, redirection of diversion ditches to the mine site, pumping water to maintain adequate flow rates in Davidson Creek. Clarification: Describe if the water balance model and water quality model include the contingency measures in the model, either as "if" statements or switches to ensure the evaluate the impact of these contingency measures on water quantity and water quality. (Source Comment ID#110)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP	Lorax	Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
544	Chapter 5: Modelling, Mitigation and Discharges	Water Management – Water Treatment	CSFN	Kareena Gill, M.Eng., P.Eng., Romick Bhatti, P.Eng.,, and Lynda Smithard, P.Eng.; McCue Engineering Contractors	Jun 02, 2022	1	New	Clarification	No	It is understood that water treatment is being incorporated into the mine plan as a best practice waste management and mitigation measure. The water quality predictions are highly dependent on the effluent water quality source terms and assumptions and thus any uncertainty in these assumptions will propagate through the predictions. Clarification: Please clarify if any circumstances exist where the water treatment measures/strategies may not be operational, whether these are related to weather, operational constraints, or economic constraints, that could result in discharge of untreated effluent to the environment. (Source Comment ID#111)	All the circumstances that could lead to discharge of untreated effluent to environment are listed below: 1.Change in inlet water quality/chemistry (e.g. pH, TSS, metal concentrations, etc...) 2.Failure in effluent water quality monitoring 3.Water level in the Metals Treatment Pond and TSF exceeding system capacity 4.Depletion of WTP chemicals/reagents 5.Disruption of equipment service (water, chemical and sludge pumps, mixers, chemical make-up equipment) 6.Disruption of Lime Supply to WTP 7.Fouling of hydrated lime injection line to Reactor Tank These risks are presented in the risk assessment submitted to BW Gold as part of the WTP Detailed Design Package (July 30, 2021). Specific risk mitigation plan or actions are also included for each of the above-mentioned risks.		CSFN	McCue		Lynda	GM	Ready for Submission	GM; June 17	Ready for Publishing
544	Chapter 5: Modelling, Mitigation and Discharges	Water Management – Water Treatment	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	A loading calculation to evaluate the percentage of untreated water that can be discharged before ENV WQGs and Yinka Dene water quality standards are exceeded in the receiving environment has not been completed to date. The capacity for the receiver to absorb untreated discharge would be expected to vary on a monthly basis and with the different project phases; however, overall it is expected to have little to no capacity. As an example, the predictions for D-Cd at WQ28 are occasionally above 80% of the long-term WQG from Closure onwards. In addition, an untreated effluent model scenario was developed in response to Round 1 Comment 99 (Lorax, 2022). In this scenario, the membrane and metals water treatment plants were turned off. The elevated concentrations for several parameters predicted under this scenario underscores the importance to develop robust water treatment plans, water management strategies and related surveillance monitoring in receiving streams below the project. Reference Lorax Environmental Services Ltd. (Lorax). 2022. Response to Round 1 Review Comment 99. Prepared for BW Gold Ltd. Technical Memorandum dated June 30, 2022.		CSFN	Lorax			GM	Ready for Submission	GM; Sept 2	Ready for Publishing
544	Chapter 5: Modelling, Mitigation and Discharges	Water Management – Water Treatment	CSFN -K. Jones	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Clarification/Recommended Permit Condition	Yes	Thanks. The reliance on treatment is understood. This item can be addressed by the permit condition outlined in comment #4 of this memo. (Source Comment ID#111)	This comment is acknowledged. Please refer to the response provided in this ITT to Round 3 Comment #437.		CSFN	Lorax					GM; Oct 31	Ready for Publishing
545	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Terms – Modelled Parameters	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The list of parameters incorporated into the water quality model is comprehensive and includes total and dissolved metals. Clarification: Please clarify how total concentrations are modelled, particularly with respect to source term development using humidity cell leachate as well as solubility constraints applied within the water quality model. (Source Comment ID#112)	Source terms are developed as dissolved concentrations. The difference in total and dissolved predictions are in the receiving environment is based on background water quality where both total and dissolved results were available. In general, dissolved and total concentrations are very similar when total suspended solids are <15mg/L as required by MDMER end for mine effluent.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
545	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Terms – Modelled Parameters	CSFN -K. Jones	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Thank you. Please confirm that TSS <15 mg/L will be a permit limit (Source Comment ID#112)	Effluent permit limits for Project discharges to the receiving environment have not yet been approved. However, a discharge limit for TSS equivalent to MDMER maximum authorized concentrations are proposed for Project surface discharges. Per MDMER, the maximum authorized monthly mean concentration for suspended solids (i.e., TSS) is 15 mg/L.		CSFN	Lorax				Ready for Submission	GM; Aug 30	Ready for Publishing
545	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Terms – Modelled Parameters	CSFN -K. Jones	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: The target limits for all direct discharges to the environment must be developed prior to the issuance of the permit and prescribed in the permit as a condition. The target limits must be developed in consultation with CSFN. (Source Comment ID#112)	The *Environmental Management Act* (EMA) effluent permit issued to BW Gold Ltd. will include flow and concentration limits for direct discharges to the environment. It is anticipated that the draft effluent permit will be provided to CSFN for review prior to permit approval. CFSN should reach ut directly to ENV, should CSFN have questions about the draft permit conditions review process.		CSFN	Lorax					GM; Oct 28	Ready for Publishing

546	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model/ Source Term Development – pH Controls (Importance Medium)	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Figure 3.7 in the Water Quality Model Report indicates that parameter concentration can vary over several orders of magnitude at a given pH value. It is understood that pH is selected to constrain concentrations is based on laboratory testing data. Clarification: Has there been any attempt to predict the pH of mixing waters or evaluate how redox and PCO2 concentrations may impact concentrations? (Source Comment ID#113)	Estimates of pH and pCO2 were used to define geochemical loading rates and set solubility controls within geochemical source terms. These source terms are then input to the GoldSim model, which functions as a conservative mixing model, except where explicitly noted (e.g., Zn and Cd solubility dependence on SO4 within TSF pond).		CSFN	Lorax		John	GM	Ready for Submission	GM; June 21	Ready for Publishing
546	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model/ Source Term Development – pH Controls (Importance Medium)	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	An expanded response to this question is requested. Please confirm that the lowest pH in the source term for base case was 4.71 above Al(OH)3 buffering, and confirm this was the minimum pH for the base case and 4.41 for the conservative case. Please discuss if loading rates for exposed PAG (particularly on the pit wall) assume this pH or a mixed pH based on weighted average of pH (log scale) or if mixing was conducted in PHREEQC.	The minimum pH values used in source term development are correctly described in the R2 comment. The weathering state of mine rock (e.g., acidic or neutral) was considered in source term development. In regards to pit wall runoff, source terms were developed for each type of wall rock (including acidic PAG1 and acidic PAG2) and the resulting runoff contributes to the pit sump/pit lake where it is conservatively mixed with other pit inflows.		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
546	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model/ Source Term Development – pH Controls (Importance Medium)	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: This uncertainty can be addressed by the permit condition outlined in comment #4 of this memo. (Source Comment ID#113)	This comment is acknowledged. Please refer to the response provided in this ITT to Round 3 Comment #437.		CSFN	Lorax					GM; Oct 31	Ready for Publishing
547	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model/ Source Term Development – pH Controls	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Figure 3.7 in the Water Quality Model Report indicates that parameter concentration can vary over several orders of magnitude at a given pH value. It is understood that pH is selected to constrain concentrations is based on laboratory testing data. Clarification: Please confirm if the constraints are assumed to be dependent on thermodynamics or potential sorption mechanisms. (Source Comment ID#114)	Arsenic was the only parameter where solubility was assumed to be controlled by a sorption mechanism. This was modelled using a PHREEQC-based hydrous-ferric oxide (HFO) sorption model, with inputs calibrated to HCT results. The HFO sorption model did not influence the concentration of any other parameter. Please refer to Section 3.6 of the Source Term Report for further description of the As HFO sorption model and other mineral solubility constraints applied in the model.		CSFN	Lorax		John	GM	Ready for Submission	AT, June 08	Ready for Publishing
548	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model/ Source Term Development – pH Controls	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	concentration can vary over several orders of magnitude at a given pH value. It is understood that pH is selected to constrain concentrations is based on laboratory testing data. Clarification: Over what scale range have the constraints been tested (i.e.., using large loading rates such as field leach bin data, seepage data, or analogue data) to ensure the pH constraint is not limited by load. (Source Comment ID#115)	Mine effluent pH is predicted based on kinetic testing. Kinetic testing included saturated columns (approx. 7kg), humidity cell tests (1kg), and field cells (2.5 to 3.0 kg). Assumptions around mine waste rock pH are described in Section 3.1.2 of the Source Term Report.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
549	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Scaling Factors	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Scaling factors are used to adjust concentrations from the laboratory scale to the field scale. This practice relies largely on experience and analogue information from other mine sites, as well as theoretical calculations. However, one assumption incorporated into the scaling factors is that sulphide oxidation effectively does not occur during periods of the year where freezing conditions persist. The process of sulphide oxidation itself involves the generation of heat so it is unclear if this particular assumption is sufficiently conservative. The Arrhenius equation is applied as a scaling factor assuming the average annual temperature. Therefore, if this scaling factor is assumed, potential freezing of the material is inherently already considered. Clarification: Clarify if the temperature scaling factor accounts for average annual temperature at the mine site and if the generation of heat through sulphide oxidation has been considered. (Source Comment ID#116)	Sulphide oxidation rates, along with most other geochemical reactions will essentially be halted under frozen conditions, because these reactions require the presence of liquid water to proceed. Therefore, geochemical weathering rates are set to zero under frozen conditions, and the Arrhenius equation is used to account for temperature effects on sulphide oxidation when temperatures are above freezing. Waste stockpiles and waste rock stored in the TSF are assumed to be above 0ºC year round, and no consideration was given to seasonal freezing of waste rock or overburden, which may occur near the surface of these facilities during winter months. The Arrhenius correction of 0.66 was applied to these source terms, which equates to an average temperature of 15ºC and is consistent with the correction factor applied in the EA source term calculations for the Project. Source terms related to surficial weathering of rock exposures (tailings beach and pit wall) were assumed to be frozen for 4 months of the year. Sulphide oxidation is expected to be inhibited under frozen conditions, and an additional scaling factor was applied to these source terms to account for this. Please refer to Section 3.4 of the Source Term Report for a full description of scaling factors.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing

550	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Annual Distribution of Load	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The loading rates are based on laboratory testing rates that are multiplied by scaling factors and ultimately divided by the amount of water infiltrating through the waste to develop a concentration. However, as has been correctly pointed out as part of the source terms, the loading rates can vary depending on temperature. Furthermore, the rate of infiltration/runoff also varies as a function of temperature and season. For this reason, there is often a seasonal variation observed in seepage water concentrations collected at mine sites. Clarification: Has seasonality been considered as part of source term development and do potential seasonal variations have the potential to impact concentrations that are ultimately discharged to the environment? (Source Comment ID#117)	Source terms are applied on an annual time step and do not vary seasonally. Seasonality of geochemical loadings in mine discharges predicted in the water quality model is controlled by the water balance.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
551	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Background Concentrations	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	It is understood that background concentrations in the receiving environment are based on observed water qualities. Clarification: Please clarify the percentile statistic for the conservative case water qualities. (Source Comment ID#118)	Monthly median concentrations from the baseline surface water quality datasets (on a station-by-station basis) were used as background terms in all model cases.		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 14	Ready for Publishing
551	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Background Concentrations	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Please confirm if any additional exceedances would be expected if the 75th percentile parameter statistic was used to calculate background concentrations due to reduced capacity for dilution (Source Comment ID#118)	Please see attachment "R2_CSFN Comment ID 551_vS.pdf"		CSFN	Lorax				Ready for Submission	GM; Sept 2	Ready for Publishing
551	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Background Concentrations	CSFN -K. Jones	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: This uncertainty can be addressed by the permit condition outlined in comment #4 in this memo.(Source Comment ID#118)	This comment is acknowledged. Please refer to the response provided in this ITT to Round 3 Comment #437.		CSFN	Lorax					GM; Oct 31	Ready for Publishing
552	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Background Concentrations	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	During the winter, creeks tend to be baseflow dominated. This means the majority of the water that discharges to the creeks is from the groundwater system. Groundwater inflows (i.e.., baseflow) tend to have higher observed concentrations than overland runoff or snowmelt inflows. During dry years, the amount of runoff can be significantly reduced relative to the baseflow proportion of flow. Therefore, segregation of these flow terms can be important with respect to climate sensitivity analyses. Clarification: Please clarify if the water quality in the creeks/streams accounted for baseflow and overland flow loading inputs. (Source Comment ID#119)	Background water quality terms for creeks/streams were derived from baseline surface water quality data, which inherently reflect baseflow and overland flow loading inputs.		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 14	Ready for Publishing
553	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Calibration	CSFN	Colin Fraser, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Calibration of a model refers to changing inputs of the model within reason to better match observed data. Benchmarking refers to a direct comparison of predicted values to observed values. Clarification: Please clarify if the water quality model calibration was conducted for all parameters of interest in the WQM and which inputs, if any, where adjusted to improve calibration. (Source Comment ID#120)	As indicated in Lorax (2021), prior to predicting water quality concentrations for the Construction, Operations, Closure and Post-Closure phases, an initial screening was conducted to assess the reasonableness of WQM outputs for the Baseline/Pre-construction period. None of the background water quality source terms inputted to the water quality were 'adjusted' or calibrated. In this regard, the initial screening steps discussed in Lorax (2021) (see Section 3.2.10) is a benchmarking exercise. Lorax Environmental Services Ltd. (Lorax). 2021. Blackwater Gold Project: Water Balance and Water Quality Model Report. Rev F. November 24, 2021. 1053 pp.		CSFN	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
553	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Calibration	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	It is understood that water quality was benchmarked and that no adjustments to concentrations or loading rates were made other than those related to effluent concentrations or due to solubility constraints, or adsorption constraints in the case of arsenic. If this understanding is correct, this comment can be considered closed. (Source Comment ID#120)	The description in R2 comment is correct. Therefore the comment will be considered closed.		CSFN	Lorax		John		Ready for Submission	GM; Sept 1	Ready for Publishing
554	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Brine Flow Term	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	During Post-Closure, the water treatment brine is assumed to be diverted to the open pit. This flow term has high concentrations associated with treatment. Clarification: Please confirm the open pit is a fully mixed reservoir that includes the brine term. (Source Comment ID#121)	Pit lake modelling results presented in the Application (submitted April 2022) consider the pit as a fully mixed reservoir and model coding includes the addition of brine to the pit lake. Note that version 12b water quality model results (see Application) were computed on October 26, 2021. Since that time, Lorax has further refined the water quality model predictions for the pit lake focusing on items such as: 1) modelling the pit lake as a one-cell versus two-cell (stratified) system, with brine directed to the deeper layer of the two-cell model domain; 2) modelling the pit lake scenario using revised assumptions for brine circulation between the WTP and pit lake; and 3) configuring a detailed pit lake model using PitMod (hydrodynamic model) to confirm timing of stratification and expected surface layer thickness of the pit lake, in post-closure. As indicated in Response 509, Version 13c water quality predictions are the most recent model output available for the Project. Version 13c predictions were presented to EMLI, ENV and First Nations technical consultants on June 15, 2022, and are summarized in Lorax 2022.		CSFN	Lorax	BQE	Colin/Veneil	GM	Ready for Submission	GM; June 21	Ready for Publishing
554	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Brine Flow Term	CSFN -K. Jones	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Thank you for the update to the model. It is acknowledged this comment is a pivot from the initial question; however, the pit lake zinc and cadmium concentrations are very high. Will efforts be made to maintain a clear water cap to protect wildlife? Further, were the concentrations presented in the PowerPoint from June 15 representative of mixed or stratified concentrations in the pit with time? (Source Comment ID#121)	With respect to the first question, please refer to the latest pit lake modelling sensitivity presented in "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624.pdf", which incorporates pit lake stratification, for further detail. A key component of the pit lake water management is the conveyance of brine from the WTP to the bottom of the pit. This serves to engineer permanent stratification in the water column, thereby physically isolating the brine flows from the surface water system (i.e., the clear water cap). In the pit lake sensitivity model referenced above, predicted Cd and Zn concentrations in the pit lake surface layer fall below BC water quality guidelines for the protection of wildlife. It is further expected that the elevation of the pit lake is expected to prevent access for most terrestrial wildlife. With respect to the second question, concentrations presented for the pit lake in the June 15 PowerPoint presentation reflected a fully-mixed (one-cell) pit.		CSFN	Lorax				Ready for Submission	GM; Aug 30	Ready for Publishing

554	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Brine Flow Term	CSFN -K. Jones	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up		No	Please refer to the Round 3 comments under comment IDs 487 and 490.(Source Comment ID#121)	Please refer to the respective responses to Round 3 Comments 487 and 490 in this tracking table.		CSFN	Lorax				28-Oct-22	GM; Nov 1	Ready for Publishing
555	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Capacity of the Open Pit to Maintain Brine Water	CSFN	Colin Fraser, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Figure 3.16 indicates you are treating about 170 m3/month of water from the open pit but discharging approximately 130 m3/month of the brine water back to the pit. Given the inflow and outflow volumes are relatively similar, it is unclear if the pit water quality will progressively worsen with time or what the capacity of the open pit is to contain the brine if brine effluent volumes are greater than 130 m3/month, particularly during wet years. Information Request: Please discuss the predicted water quality of the open pit with time and what realistic conditions (i.e.. treatment discharge rates), if any, would result in capacity of the open pit capacity to retain water being exceeded. (Source Comment ID#122)	For the modelling work presented in the Application, the Membrane WTP capacity is 190 L/s (or 492,500 m3/month) during Post-Closure. Make-up water to maintain the constant influent rate is sourced from TSF C when flows from the ECD and Pit Lake are not sufficient. Brine created during the treatment process is discharged to the Pit Lake, with treated effluent from the Membrane WTP being discharged to applicable infrastructure (i.e.., the FWR/Plunge Pool). For the scenarios modelled as part of the Application submission (i.e.., Average climate case, Climate change case and Variable climate case), water balance simulations did not show uncontrolled/passive discharge. In other words, the capacity of the pit lake to retain contact water wasn't exceeded during the simulations.		CSFN	Lorax	KP	Colin/Cindy	GM	Ready for Submission	GM; June 21	Ready for Publishing
555	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Capacity of the Open Pit to Maintain Brine Water	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Thank you for the response. Please clarify if the brine inflow and water quality in the Open Pit reaches steady state conditions. (Source Comment ID#122)	With respect to brine inflow to the pit, the water balance assumes a variable water treatment rate (and therefore brine inflow rate to the pit) that depends on site water management needs under the range of variable climate conditions considered in the model. In the water balance average climate case, this treatment rate effectively achieves steady at the onset of the Post-Closure phase. With respect to open pit water quality, please refer to updated pit lake model results presented in Round 2 attachment "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624". This updated model presents the predicted spatial and temporal distribution of temperature, density, dissolved oxygen and water quality parameters in the lake. As shown in Appendix A of "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624", certain parameters such as dissolved oxygen, are predicted to reach steady state within the model time frame from the perspective of spatial distribution within the pit lake water column (Figure 4-4 of Appendix A). Other parameters, such as TDS, do not achieve steady state within the model time (Figure 4-3 of Appendix A)		CSFN	Lorax				Ready for Submission	GM; Sept 2	Ready for Publishing
555	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Capacity of the Open Pit to Maintain Brine Water	CSFN -K. Jones	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up		No	Please refer to the Round 3 comments under comment IDs 487 and 490. (Source Comment ID#122)	Please refer to the respective responses to Round 3 Comments 487 and 490 in this tracking table.		CSFN	Lorax				28-Oct-22	GM; Nov 1	Ready for Publishing
556	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model / Source Term Development – Sludge Characterization	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommended Permit Condition	Yes	Sludge will be generated at the site. A source term for the sludge has not been developed as it is assumed to contribute a negligible amount of load to the overall load in the TSF. Recommended Permit Condition: It is recommended that sludge characterization and stability in varying redox conditions be determined as a requirement of the permit. Incorporation of the sludge into predictions should also be completed should it be determined that resulting concentrations will be significant. (Source Comment ID#123)	This comment is acknowledged.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
557	Chapter 5: Modelling, Mitigation and Discharges	Waste Management Alternatives – Backfill to Open Pit	CSFN	Greg Smyth, B.Sc.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	The open pit will be filled with water and the water quality model indicates that water from the open pit will not be discharged to the downstream environment. The dry scenarios in the Water Balance Report indicate that PAG waste may be exposed during certain dry years. Clarification: Given this potential, please describe if backfilling waste rock material to the open pit has been considered. (Source Comment ID#124)	Backfilling of waste rock material to the open pit has not been considered as a mitigation for the dry scenarios contemplated in the water balance model. A more practicable alternative is to augment water supply to the TSF to maintain waste rock saturation.		CSFN	KP		Greg/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
558	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Excess Water	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	As tailings are progressively deposited into the TSFs, the weight of the tailings will cause the tailings to compact and excess pore water released from this settling will discharge into the tailings pond. This excess water will largely be similar to process water. The concentration of select parameters was set equal to the TSF pond concentration. It is not immediately clear if this is a conservative approach. Figure 4.5 and Figure 4.6 suggest that it does represent a reasonable assumption for sulphate and molybdenum but a comparison of other parameters was not provided. Clarification: If the source term impacts concentrations significantly, please confirm that the concentration applied to this source reasonably represents the excess pore water. (Source Comment ID#125)	Trace metal concentrations were set equal to median and 90th percentile saturated column concentrations for base case and upper case, respectively. This approach was taken so that tailings consolidation water could reflect interaction with tailings under saturated conditions. Consolidation water constitutes 3.4% to 8.5% of annual inflow volume to TSFC, and 4.2% to 5.7% of annual inflow volume to TSF D during active tailings deposition.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
558	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Excess Water	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Saturated columns do not consider the load released to the slurry (i.e. process water which will be the water that is within the pores at deposition). The response does indicate that excess water is less than 10% of the inflow and therefore the implications associated with this source term are low. Therefore, confirmation that the process water chemistry will be within an order of magnitude of the concentration associated with the subaqueous column leachate is requested. (Source Comment ID#125)	Please see attachment "R1_CSFN_Comment IDs 437 and 558.pdf"		CSFN	Lorax				Ready for Submission	GM; Sept 2	Ready for Publishing

559	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Inflow and Outflow Figures	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Figures 2.6 and Figure 2.7 indicate the storage capacity of the TSF Ponds. However, the open pit storage capacity figure was not identified in the main body of the report. Information Request: Please provide the storage capacity figure of the Open Pit for the VCC case and a 1:100 year wet scenario, assuming maximum water treatment rates. (Source Comment ID#126)	Please see attachment "R1_CSFN Comment IDs 531-536 538 539 543 559.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission		Ready for Publishing
560	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Seepage Rates	CSFN	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The groundwater seepage flow terms were based on incorporating mean or median or flow time estimates. Seepages with a median or mean travel time greater than 125 years were not included in the model. Clarification: Please describe if the lower travel time estimate of the mean or average was incorporated into the model and/or if this has resulted in the exclusion of a flow term that otherwise would have been included. Further, does the inclusion of a portion of an excluded seepage flow term result (e.g., Incorporating 20% of the seepage if the median travel time is 200 years) result in measurable changes to receiving water quality? (Source Comment ID#127)	Seepage travel times incorporated into the water quality modelling were based on median travel time estimates. The median travel times were equal to or lower than the average travel times for approximately 75% of the potential seepage paths predicted to originate from the TSF and stockpiles. There are no instances where incorporating the average travel time rather than the median would have resulted in the inclusion of an additional seepage path in the modelled analysis. The inclusion of a seepage flow term that constitutes recoverable seepage would not be expected to result in a measurable change to receiving water quality, as recovered seepage is ultimately directed to treatment. The inclusion of a flow term that constitutes unrecoverable seepage has potential to change receiving water quality, but the degree of change has not been quantified in the water balance/water quality model to date. As noted in Comment response 130, BW Gold acknowledges uncertainty in TSF seepage and potential changes to predicted receiving environment water quality and quantity. A model sensitivity will be conducted to address Comments 130, 142, and 417. The predicted water quality results of model output will be presented in a memorandum provided to MRC on or before July 20, 2022.		CSFN	KP	Lorax	Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
560	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Seepage Rates	CSFN -K. Jones	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	It is understood the open pit will maintain a lower water level to capture potential escape of recoverable seepage. Please confirm if any flow pathways with travel time estimates with average/median travel time estimates greater than 100 years have the potential to exceed guidelines if only a portion of the seepage discharges to the receiving environment (eg. 20%), if not recovered. Please confirm if additional PAG rock will be exposed at closure due to this change in operational management. If so, how will this impact the pH of the pit and potential stratification that would preclude the development of a clear water cap at closure due to elevated loadings from the rock walls to surface? (Source Comment ID#127)	The closure plan is to maintain the pit lake water level surface at a level that causes the pit lake to function as a groundwater sink and prevent seepage from leaving the lake. The pit lake water level and groundwater levels surrounding the pit lake will be monitored while the pit lake is filling during Closure and in Post-Closure to ensure the pit lake level remains below the surrounding groundwater levels. Seepage is unable to leave the pit lake when it is maintained as a groundwater sink and seepage would consequently be unable to contribute to the downstream environment. The pit lake will be managed at a lower elevation if maintained as a groundwater sink. This will result in additional pit wall rock being exposed at closure, which includes additional PAG1 and PAG2. The PAG1 exposure increases from approximately 7 ha with the higher pit lake elevation up to 13 ha with the lower pit lake elevation (10% to 14% of exposed pit wall) and the PAG2 exposure increases from approximately 8 ha to 12 ha (10% to 13% of exposed pit wall). The water quality model does not include predictions for pit lake pH. The additional modelling conducted for the two cell pit lake in GoldSim and PitMod have used the lower elevation (1,440 masl). These results have been presented in "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf" and "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624.pdf". The TDS of pit wall rock runoff is minimal in comparison to brine, and therefore would have little or no impact on pit stratification. For comparison, the TDS in pit wall runoff calculated using the pit wall proportions and pit wall source terms for the different rock types (e.g., PAG1, PAG2, NAG3, etc.) is approximately 550 mg/L, while the TDS of the brine is approximately 5,500 mg/L.		CSFN	KP	Lorax	Cindy		Ready for Submission	KP, Sep 7	Ready for Publishing
560	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Model – Seepage Rates	CSFN -K. Jones	Knight Piésold Ltd. and Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: This uncertainty can be addressed by the permit condition outlined in comment #4 of this memo. (Source Comment ID#127)	Please see the response to Comment 437.		CSFN	KP	Lorax	Cindy	AT/KP	Ready for Submission	GM; Oct 24	Ready for Publishing
561	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Anoxic Saturated Waste	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The source terms for saturated anoxic waste rock assumes a one-time release of soluble constitutes upon submergence. Clarification: Please confirm leachate results of anoxic tests, such as subaqueous columns, are consistent with this finding, particularly as they relate to dissolution. (Source Comment ID#128)	Metal release associated with saturation of waste rock is modelled as a function of exposure time. The release of this geochemical load is conservatively assumed to be instantaneous upon submergence, rather than gradual over time. These peak concentrations are applied to water passing through waste rock throughout the post-closure period, with no consideration of rinsing out of peak concentrations. This is generally consistent with submerged column results, which show peak concentrations immediately after test initiation.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
561	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Anoxic Saturated Waste Rock	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	The objective of the question was to determine if release of contaminants due to a change in redox conditions may occur. Therefore, the comment has been rephrased. Clarification: What was the DO and/or Eh of the leachate of the subaqueous columns? Can they be used to identify potential release due to a change in redox conditions? Is there the potential release of contaminants through reductive dissolution, once flooding occurs that may not be accounted for in the source term, and if so, will the impact of that be significant or negligible? The response indicates that peak concentrations are applied to water passing through waste rock throughout the post-closure period, with no consideration of rinsing out of peak concentrations. Further clarification is requested on this statement. Is the flushing term applied as a constant term throughout operations and closure? If so, this would be a highly conservative source term and this item can be closed. However, if it is applied as a one-time instantaneous load, please briefly respond to the additional questions. (Source Comment ID#128)	The flushing term is applied as a constant term throughout operations and closure. No consideration of rinsing out of these peak concentrations is incorporated into the source terms. The high degree of conservatism in this approach is acknowledged.		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
562	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – LGO Tailings Source Term	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The LGO head samples results show higher zinc concentrations. The source term report does not describe the use of LGO metallurgical samples in the source term for the exposed beach tailings. Clarification: Given the LGO is exposed for a longer period of time than ROM material, describe if this is expected to deplete the neutralizing minerals and impact lag time and leaching rates of the tailings. (Source Comment ID#129)	Source Term Approach The tailings beach source term was based on a single HCT (WOT-HCT) constructed from whole ore tailings produced from metallurgical testing in 2011. These results were applied to both HGO and LGO tailings beach exposures. The overall approach was consistent with what was applied in the EA source term calculations for the Project. Onset of ARD Ore is generally classified as PAG1, which would have minimal lag time until onset to ARD - refer to Section 3.5 of the Geochemical Source Term Report. Addition of lime in the mill will neutralize any acidity associated with ore, and amend a modest amount of NP to both HGO and LGO tailings samples. Metal Leaching The reviewer is correct to note that process water and saturated column tests show higher metal leaching potential from LGO compared to HGO tailings. This result is consistent with accumulation of oxide minerals during subaerial weathering, which are rinsed upon processing and submergence. However, in the subaerial tailings beach environment, metal leaching rates would largely be driven by sulphide mineral oxidation. The reactivity of sulphide minerals would not increase as a result of stockpiling of LGO ore. Subaerial weathering of LGO ore would potentially consume the most reactive sulphide mineral phases, and sulphide mineral reactivity would decline with age. For these reasons, applying the same subaerial weathering rates to LGO and HGO tailings beaches is considered reasonable.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing

562	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – LGO Tailings Source Term	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Thank you for the response. It is understood that sulphides will deplete; however, neutralizing minerals will also deplete with time. The question was in regard to the accelerated depletion of NP and thus a potentially lower pH for infiltrating water and potentially higher metal release rate for some trace metals. Clarification: Please confirm that the depletion of NP is not expected to result in tailings with an overall higher potential for metal leaching (once deposited on the beach) as the additional NP in the mill will be sufficient to maintain neutral drainage for the period tailings are exposed. (Source Comment ID#129)	The tailings beach metal leaching rate will be strongly influenced by pH. The tailings will initially be deposited with slurry water at pH 8.5 and be buffered by residual lime and NP bearing carbonate minerals. A neutral to alkaline pH will be maintained while these NP sources are available. The lag time until ARD development will largely be a function of the availability of NP, which will be determined by lime addition, rock types being processed (andesite, fragmental volcanics, laminated volcanics) and ore source (ROM vs. LGO). Maintaining neutral-alkaline conditions on the tailings beach will be achieved through spigot management, which will be a key component of tailings beach operations. The tailings beach source term is developed assuming a pH of 6.9, which assumes spigot management is not able to maintain the alkaline conditions of initial tailings slurry. This pH assumes that the most effective NP sources (Ca&Mg-carbonate minerals and lime) are unavailable, and the pH has declined to circumneutral values. This has a pronounced impact on source term derivation. For example, the current source terms predict Zn and Cd concentrations in TSF beach runoff of 1.4 mg/L and 0.028 mg/L, respectively. If the pH of slurry water was assumed (pH 8.5) the solubility of these elements would be limited to 0.30 mg/L and 0.005 mg/L, respectively, based on secondary mineral solubility constraints developed within PHREEQC.		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
562	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – LGO Tailings Source Term	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: The concentrations of the many parameters may increase if the pH of the tailings declines below 6.9. Therefore, this can be addressed through permit condition listed in comment #4 of this memo. (Source Comment ID#129)	See comment 437 R3 response		CSFN	Lorax					GM; Oct 31	Ready for Publishing
563	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Modelling – Detection Limit Constraints	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Be and Hg are set to DLs due to interference with detection limits as is standard practice. Clarification: Please confirm that all leachate geochemical tests and/or field scale tests and seeps similarly have beryllium and mercury concentrations measured below the analytical detection limit. (Source Comment ID#130)	BW Gold confirms that these elements are generally at or below detection limits in neutral pH kinetic tests. In general, Be and Hg are insoluble under neutral pH conditions in the absence of CN or other complexing ligands.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
563	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Modelling – Detection Limit Constraints	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Beryllium concentrations can increase in acidic drainage by an order of magnitude. Please confirm that beryllium is largely below the BC ENV WQG for beryllium in the acidic leachate. If this is the case, this comment can be closed. If not, please confirm that beryllium concentrations in acidic leachate were included in the source terms. (Source Comment ID#130)	Please see the response to Comment #417h in the attachment "R2_EMLI Comment ID 417 h.pdf"		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
563	Chapter 5: Modelling, Mitigation and Discharges	Water Quality Modelling – Detection Limit Constraints	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	The pH was not discussed in the response; however, given the maximum observed concentration of beryllium was marginally above the working guideline, this comment can be closed as metal leaching of pH sensitive parameters will be addressed in the permit condition outlined in comment #4 of this memo.. (Source Comment ID#130)	See comment 437 R3 response		CSFN	Lorax					GM; Oct 17	Ready for Publishing
564	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Loading Rates from HCTs	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The loading rates from the HCT were adjusted so that they were based on the dataset compiled over a 52-week period rather than having an operational rate and a closure rate. It is understood that the base case source terms also did not include the initial flush in the value (i.e.., the first 5 weeks). It is unclear if, in some cases, the expanded dataset resulted in lower base case source terms. This is particularly true if pH decreases over the course of the test or if there was a significant flushing source term. Information Request: Please compare the base caseloads to base caseloads calculated by including the first 5 weeks of the leachate data and base caseloads calculated on the last 10 weeks of data only (ending at 52 weeks). This information can also be presented as concentrations if preferred. (Source Comment ID#131)	Please see attachment "R1_CSFN Comment ID 564".		CSFN	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
565	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Conservative Loading Rates	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	HCT ARD2-9 represented the 95th percentile sulphur content. It is understood that this HCT was excluded from the source term development. Depending on HCT sample size and loading rates, the difference between the conservative case source term and the base case source term can be minimal if variability between tests is low and the concentrations in the leachate dataset were relatively constant. Therefore, it is sometimes appropriate to use extreme material as an upper bound as it provides a broader range in variability. Using loading rates material representative of higher end sulphide content often results in chemistry that is unlikely to be observed in the field, depending on the range of variability in the datasets. However, given the large uncertainty associated with source term development and water quality models, this information can be useful for the development of contingency measures. Information Requirement: Compare the loading rates from ARD2-9 (last 10 weeks or average concentration) to the conservative case loading rates used as part of source term development. (Source Comment ID#132)	Please see attachment "R1_CSFN Comment ID 565".		CSFN	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
566	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Appropriateness of the pH Value Applied to Source Terms	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The pH ranges used to develop source terms tended to be relatively high and above alumino-silicate buffering. The base case pH was 4.71 and upper case was 4.41 for the conservative case source term for acidic waste rock. It is understood that PAG rock will be submerged within a year and therefore silicate buffering may maintain a relatively elevated pH value. Information Request: Can the pH used to develop source terms be compared to the pH value measured in the last 5 weeks of each HCT ending at week 52, as well as the last 5 weeks of the HCT tests, assuming the tests ran longer than 52 weeks? (Source Comment ID#133)	Please see attachment "R1_CSFN Comment ID 566".		CSFN	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
567	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Beach Tailings	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The beach tailings contribute a load during operations. The reaction depth for the tailing beach used to develop the loading rates was 10 cm. Clarification: Was this depth also used for the conservative case? (Source Comment ID#134)	Yes, 10cm was used in both Base Case and Upper Case tailings beach source terms.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing

568	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Beach Tailings	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The beach tailings contribute a load during operations. The reaction depth for the tailing beach used to develop the loading rates was 10 cm. Information Request: What analogue data was used to establish the reaction depth for the tailing beach depth and will/has it been verified? (Source Comment ID#135)	Please see attachment "R1_CSFN Comment ID 568".		CSFN	Lorax		John	GM	Ready for Submission	GM; June 22	Ready for Publishing
568	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Beach Tailings	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Thank you for the response. There are similar studies that show that oxygen can penetrate between 1 m and 0.5 m beneath ground surface. The penetration depth can also be based on sulphide content. Elevated sulphide content can consume oxygen and reduce the penetration depth. Therefore, it remains unclear if 10 cm is a reasonable penetration depth. Recommendation: Please discuss the implications of a 20 cm penetration depth. This is especially true considering the uncertainty associated with source terms and water quality predictions that cannot be validated. A model update is not being requested at this stage, just an assessment of the implications. (Source Comment ID#135)	The depth of oxygen ingress is used as a scaling factor to relate the HCT loading rates to field conditions. Doubling the depth of oxygen ingress from 10 cm to 20cm would double the upscaled loading rate. This would result in a proportional increase in conservatively treated parameters (F, SO4, Ba, Ca, Cd, Co, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Si, Sr, Tl, U, V and Zn) in the absence of additional solubility considerations. Note refer comment 562 R2 response for additional details on tailings beach source term conservatism.		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
568	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Beach Tailings	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: This can be addressed by the permit condition outlined in comment #4 of this memo.(Source Comment ID#135)	See comment 437 R3 response		CSFN	Lorax					GM; Oct 17	Ready for Publishing
569	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Loading Rates vs Concentrations	CSFN	Jennifer Stevenson, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The source terms are presented as concentrations. It is possible the rate of sulphide oxidation will remain constant in the field, but the rate of flushing will be variable. Clarification: In the VCC case, was the loading rate applied to the model constant or was the concentration applied to the loading rate constant? (Source Comment ID#136)	The source terms were applied to the VCC model using the same approach as the base case model. This results in increased loadings during wet years within the VCC model.		CSFN	Lorax		Jen	GM	Ready for Submission	GM; June 20	Ready for Publishing
570	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – LGO Loading Rate	CSFN	Jennifer Stevenson, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	The loading rate for LGO is 118 mg/kg/wk which is almost an order of magnitude greater than the loading rate for all other cells. This loading rate is taken from Table 3.4. However, the source for low grade ore is surprising low and ranges between 24 and 87 mg/L in year 16 (Table 4.13). This appears to be related to a translation error. Clarification: Please confirm the loading rates in Table 4.13 and confirm the translation error did not propagate through the model. (Source Comment ID#137)	There is an error in Table 4-13 where the rows should be shifted up by one row from sulphate downwards. The source terms for untreated LGO seepage included in Appendix C1-4 (Base Case) and Appendix C2-4 (Upper Case) of the Geochemistry Source Term report (Appendix A.6 of Appendix 5-D) are correct. The inputs to the model were verified and are correct.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
571	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Pit Wall Source Term	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	According to the information presented in Table 4.9, the concentration associated with pit wall runoff was 1067 mg/L. The generation of acidic drainage on pit walls can often be a dominant load source to pit water. Clarification: Please confirm if the following statement is correct. If the pit wall was entirely PAG 1 rock, would the associated drainage in the Open pit only be 1067 mg/L? (Source Comment ID#138)	Yes, this statement is correct.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
571	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Pit Wall Source Term	CSFN -K. Jones	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Please briefly describe the % area attributed to this rock type and the periods of time this rock type is exposed, and the contribution (by flow and not load) that this rock type contributes to the open pit water quality. (Source Comment ID#138)	Please see attachment "R2_CSFN_Comment ID 571_vS.pdf"		CSFN	Lorax				Ready for Submission	GM; Sept 2	Ready for Publishing
572	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Pit Wall Source Term	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	According to the information presented in Table 4.9, the concentration associated with pit wall runoff was 1067 mg/L. The generation of acidic drainage on pit walls can often be a dominant load source to pit water. Clarification: Was the pit wall concentration calculated by assuming the load of the exposed rock and an annual volume equivalent to the annual amount of runoff over pit walls, or does it include flow from the other inflows to the pit during closure? (Source Comment ID#139)	Pit wall source terms were calculated by scaling laboratory kinetic test results for each rock class and converting loadings into concentrations using runoff volumes followed by application of solubility controls. Source terms were developed for each rock class individually. The relative exposure of these rock types will evolve as the mine pit is excavated, with increasing quantities of PAG 1 and PAG 2 reached at depth. The concentrations presented in Table 4-9 and 4-10 of the Geochemical Source term Report are for wall rock runoff. This does not incorporate pit inflows from other sources (e.g., groundwater).		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
572	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Pit Wall Source Term	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Thank you for the information. To address the uncertainty of source terms, a permit condition is recommended to conduct validation of the source terms and of the WQM predictions. (Source Comment ID#139)	The comment is acknowledged. Note that existing commitments for the 5-Year Update commitments include a review of source terms and modelling every 5 years.		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
572	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Pit Wall Source Term	CSFN -K. Jones	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: A permit condition will include annual model validation of the water quality model to observed water quality and flow. The validation should be provided in the Annual Reports submitted to EMLI and CSFN by March 31 of the following year. The validation must be completed by a QP. Should the model validation indicate that the predictions are not conservative, the model should be updated by Dec 31st of the same year the model validation was completed. The model should be used as a working tool to improve predictions on an ongoing basis. (Source Comment ID#139)	This recommendation is acknowledged. It is noted that water quality and flow predictions from the latest, finalized water balance/water quality model will be compared to measured water quality and flows as part of BW Gold's annual reporting commitments, consistent with ENV (2016), thereby providing a validation of the model. If predicted parameter values are significantly lower than measured values, BW Gold will provide planned actions to ensure continuous environmental protection (ENV 2016) and an evaluation will be conducted to identify the cause of the non-conservative predictions. In some cases, the source of non-conservative predictions may be readily rectified by BW Gold and a model update may not be warranted (e.g., if a water treatment plant is not treating as efficiently as originally estimated, but the treatment efficiency can be improved by adjusting the dosing within the plant). It is anticipated that the water balance/water quality model will undergo updates every five years, per commitments made under separate Review comments, in addition to a Year 2 update per Comment Response 437. Reference: British Columbia Ministry of Environment (ENV). 2016. Annual Reporting Under the Environmental Management Act. Technical Guidance 4 Environmental Management Act Authorizations. Version 1.3 May 2016. Retrieved from: https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/annual_reporting_guidance_for_mines.pdf		CSFN	BWG	KP/Lorax			26-Oct-22	GM; Oct 26	Ready for Publishing

572	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Pit Wall Source Term	CSFN -K. Jones	Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up	Recommended Permit Condition	Yes	Regarding the term "significantly lower", this should be quantified in the permit. The maximum time between water quality model updates is acknowledged to be 5 years in the absence of permit amendments. However, should the model and/or source terms result in predictions that are "significantly lower", which can be defined as resulting in water quality exceedances in the receiving environment during any phase of mine life, the water quality model should be updated and the predictions should be refined and mitigation and management plans should be developed accordingly.	BW Gold acknowledges the reviewer's recommendations and looks forward to reviewer the draft permit conditiosn from EMLI and ENV. BW Gold has made several commitments around updating water quality models. These have been documented through the following which were recetly re-communicated to CSFN during an RLCE review meeting on Dec. 14th, 2022. **Mines Act Permit Req's:** • The 5-year mine and reclamation plan update is excpected to include a regulatory requirement to update the water balance and water quality modelling and subsequently the bond. • Furthermore, the interim reclamation bonding policy from EMLI (April 2022) requires that the permit includes a bonding schedule, so in between 5-year plan review periods, there is also a requirement to bond based on LGO stockpiles volumes as well as water treatment costs. **EAC Plan 33 Mine Waste and Water Management Plan: includes the following requirement:** • The MWWMP will be updated at least every five years from the planned commencement of Construction, unless otherwise authorized by the EAO. • Revisions to the MWWMP every 5 years will include any updates from the outcomes of the modelling scenarios defined in the EAC Condition 11 Care and Maintenance Plan (BW Gold 2022e). • The 5-year updates will be consistent and aligned with the timing for an updated detailed 5-year mine plan and reclamation and closure plan. **Brine Management Workplan (MRC comment 411c):** • BW Gold submitted the first two deliverables to the MRC on November 22, 2022 which included a report identifying if there is a preferred alternative treatment option for post-closure (excluding reverse osmosis or nano-filtration),areport on alternative treatment option (if one is identified through the risk assessment) and finally an evaluation of parameters of concern in post-closure. • The brine management workplan also includes a requirement to develop a water balance/water quality model (WB/WQM) sensitivity(ies) that evaluates and ultimately identifies preferred options identified near term-evaluation tasks 1-6. The delivery date for this item is planned for May 2024, which is prior to the requirements for a 5 year plan update.		CSFN	BWG					TD, Dec 19	Ready for Publishing
573	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Recirculation Term	CSFN	John Dockrey, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	It remains unclear if there is the potential for parameter recirculation from the mine waters to the mill during various mining operational, treatment scenarios, for each phase of mine life. Information Request: Describe the potential for the need to consider recirculation of parameters sourced from reclaim water in additional detail, particularly as it relates to N-species and sodium/sulphate. (Source Comment ID#140)			CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
573	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Recirculation Term	CSFN -K. Jones	Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Thank you for the information. To address the uncertainty of source terms, a permit condition is recommended to conduct validation of the source terms and of the WQM predictions. (Source Comment ID#140)	Reference: British Columbia Ministry of Environment (ENV). 2016. Annual Reporting Under the Environmental Management Act. Technical Guidance 4 Environmental Management Act Authorizations. Version 1.3 May 2016. Retrieved from: https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/annual_reporting_guidance_for_mines.pdf		CSFN	Lorax				Ready for Submission	GM; Sept 1	Ready for Publishing
573	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Recirculation Term	CSFN -K. Jones	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: This comment can be addressed by the permit condition outlined in comment #4 of this memo.(Source Comment ID#140)	See comment 437 R3 response		CSFN	Lorax					GM; Oct 17	Ready for Publishing
574	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development - Water Treatment Effluent Water Quality	CSFN	Kareena Gill, M.Eng., P.Eng., Romick Bhatti, P.Eng.,, and Lynda Smithard, P.Eng.; McCue Engineering Contractors	Jun 02, 2022	1	New	Information Requirement	No	The treatment effluent used is Test 9 in Table 4.18. Information Request: What is the likelihood the effluent quality will be attained consistently in the field or in the event concentrations are higher than predicted and what was the variability between the tests, if applicable? (Source Comment ID#141)	The Metals WTP design provides flexibility to optimize the removal of parameters of concern to meet the discharge limits. The reagent dosing can be adjusted based on the variation in the influent water quality. A range for estimated treatable concentrations for the parameters of concern has been presented in our response to Comment 424. The estimated maximum influent treatable concentration is higher than the predicted maximum influent concentration. To achieve effective treatment in the field, the influent water quality should be monitored regularly, and the dosing rate should be adjusted by the operator accordingly. During bench test program conducted in 2016, synthetic water sample with the same water quality was used to conduct all the tests, including Test 9. There was no variation in the water quality.		CSFN	McCue			GM	Ready for Submission	GM; June 28	Ready for Publishing
574	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development - Water Treatment Effluent Water Quality	CSFN -K. Jones, F. Mohamm	Kareena Gill, M.Eng., P.Eng., Romick Bhatti, P.Eng.,, and Lynda Smithard, P.Eng.; McCue Engineering Contractors	Aug 22, 2022	2	Follow Up	Information Requirement	No	See also 220822 Source Round 2 Detailed Comments on the Revised Blackwater Major Works Application (Batch 2C).docx Information Request: Please provide the results of bench testing that indicates that minimum concentrations of all COPCs can be achieved simultaneously (i.e. coming from a single bench test mimicking a specific set of process conditions). Recommendation: If such results are not available, further treatment testing should be conducted to assess what level of removal rates can be achieved simultaneously. Further, the treatment efficiency and design for the removal of contaminants including antimony, cadmium, and manganese must be verified through additional testing that involves spiking water to the maximum concentrations expected for all contaminants, as maximums expected values of Cd and Mn used in bench work were approximately an order of magnitude lower than those expected from the water quality model. Alternatively, design modifications in the Metals WTP should be made that allow multiple stages of removal. For example, the Metals WTP could use multiple pH adjustment/reagent injection points to more optimally remove metals (i.e. run the clarifier at pH 9.5-10 to maximize manganese removal followed by operating the MMF at pH 6.5-7 to maximize antimony removal). Making this design change would require addition of reagent injection points ahead of the MMF (i.e. inject pH adjustment/sulphide/ferric reagent into T-301A, see Fig PID-003 of Appendix 5-G of the application). (Source Comment ID#141)	Please see attachment "R2_CSFN_Comment ID574.pdf"		CSFN	McCue			GM	Ready for Submission	GM; Sept 2	Ready for Publishing

575	Chapter 5: Modelling, Mitigation and Discharges	Source Term Development – Saturated Waste Rock Load	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Please clarify if the waste rock saturated load in the TSF is mg/yr. or mg/L as both units are listed in the tables presented in Appendix C (pdf page 466 and 467). It is assumed this is a minor typo as the loads are consistent with the loads outlined in the report. (Source Comment ID#142)	Yes, this is a typo. The units for the source terms presented on these two pages of the document are mg/yr.		CSFN	Lorax		John	GM	Ready for Submission	GM; June 20	Ready for Publishing
576	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Monitoring report – Watershed Areas	CSFN	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Catchment loss and dewatering can impact runoff and baseflow estimates. Clarification: Please confirm the baseflow changes predicted with the numerical model correspond to the baseflow changes predicted in the water balance. (Source Comment ID#143)	The baseflow changes predicted with the numerical groundwater model correspond well to the baseflow changes calculated in the water balance. Modelled baseflow changes include the following: •Baseflow changes estimated in Operations with the groundwater model attributed to pit dewatering and pumping are 5 L/s in the drainages to Creek 661. The reported baseflow change in the water balance model is 5 L/s in early operations and approximately 10 L/s in later operations/closure when the TSF footprint expands into the catchment and the Spillway is constructed and diverts water from the Creek 661 catchment to Davidson Creek. Loss of contributing catchment area in Creek 661 due to expansion of the TSF and construction of the Closure Spillway was not considered in the estimate of baseflow reductions in the groundwater model. •Baseflow changes estimated in Post-Closure with the groundwater model attributed to the open pit are 1 L/s in sub-catchment H1 and 3.6 L/s in sub-catchment H11. Baseflow reductions in the water balance model are the same in H1 and are on par in H11, when the effects of the reduced contributing catchment area are considered.		CSFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
577	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Transient Model	CSFN	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Please comment on the potential need for a transient model to adequately model open pit dewatering and open pit filling time for this project.. (Source Comment ID#144)	A transient model may be used to model open pit dewatering for this project. A preliminary model would be developed during the planning and pre-mine stages. As dewatering advances, groundwater removal and water level drawdown around the open pit will be tracked. Based on the collected data, the conceptual model will be revisited and the numerical model recalibrated, resulting in improved estimates of hydraulic conductivity and storage values. Dewatering plans would be refined based on the data and model output. Flooding of the pit lake will be accelerated by water pumped from the ECD, TSF, and Upper Waste Stockpile. These augmented contributions account for approximately 97% of the 10 Mm3 average annual inflows to the pit lake during that time and will ultimately control the time it takes to fill the pit lake. A transient groundwater model developed for the purpose of assessing pit filling time would have limited benefit given that the managed flows directed to the pit control the pit filling time.		CSFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
577	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Transient Model	CSFN -K. Jones	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Thank you for the response. It is acknowledged that the benefits of a transient model will be limited during preferential flooding. However, the development of a transient model would be preferred during the detailed design stage. (Source Comment ID#144)	BWG acknowledges this comment. Development of a transient groundwater model will be undertaken to support future open pit dewatering and depressurization considerations.		CSFN	KP		Cindy		Ready for Submission	AT, Aug 30	Ready for Publishing
577	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Transient Model	CSFN -K. Jones	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Potential Permit Condition	Yes	Potential Permit Condition: A transient model should be developed prior to mining as per the commitment indicated as part of the response. This should be considered a potential permit condition if not developed prior to permit issuance.(Source Comment ID#144)	A transient groundwater model will be developed to support open pit mining. A transient groundwater model will be developed prior May 2024, consistent with the proposed timing to complete the updated water balance and water quality modelling to assess alternative Post-Closure water management and treatment strategies.		CSFN	KP		Cindy	GM	Ready for Submission	GM; Oct 21	Ready for Publishing

578	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Calibrated Values	CSFN	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	Calibration of the model involves varying recharge rates. The rates were initially set to match the water balance but were adjusted through calibrated. Clarification: Please confirm that the final values resulting from the calibration did not result in significant changes to baseflow estimates and if so would not significantly impact the receiving environment quality and quantity predictions (Source Comment ID#145	The final recharge values assigned to the calibrated groundwater model were within +/-15% of the calculated recharge values assigned to sub-catchments in the baseline watershed model in Davidson Creek. The final recharge values assigned to the calibrated model were within +/-1% of calculated recharge values assigned to the two sub-catchments in Creek 661 that were calibrated to streamflow data (H1 and H11) in the baseline watershed model and within 10% at the downstream-most sub-catchment (1-661) that did not have available streamflow measurements. Recharge values assigned to the calibrated groundwater model in sub-catchments in Davidson Creek and Creek 661 are a very good match to calculated recharge values in the watershed model (within the range of measurement error) and there is therefore no consequential impact on predicted receiving environment quantity or quality. This is reasonable since the focus of calibrating the groundwater model was placed on obtaining a good match to the available data in Davidson Creek and Creek 661 where potential impacts to flows may occur. The comparison between recharge values assigned to Creek 705 and Turtle Creek are a less good match, which was considered acceptable during the model calibration considering impacts to groundwater are not anticipated in these catchments.		CSFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
579	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Liners	CSFN	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	The numerical model report indicates that "placement of a geosynthetic liner is proposed along the upstream face of the Saddle Dam and West Dam and above the elevation of the low permeability core along Main Dam C." and "The LGO liner system will incorporate two types of low permeability liners to limit seepage, including compacted glacial till and HDPE geomembrane. The till liner will be graded to convey surface runoff and foundation drains will be installed below the till liner to collect potential seepage and limit development of groundwater pressures below the liner with flows from both conveyed to the contact water collection channels. An HDPE liner will be installed where water ponding or concentrated flows are expected within the contact water collection channels and at the collection pond. Clarification: Please confirm the assumptions regarding liner placement are consistent with the current water management plan. (Source Comment ID#146)	Boundary conditions representing HDPE liners within the TSF were incorporated in the numerical groundwater model consistently with designs presented in Appendix 3-K. The objective of the seepage analysis completed at the LGO stockpile was to assess potential seepage pathways if seepage was to bypass the engineered liner and seepage collection system; therefore the liner system was not represented in the model in this case.		CSFN	KP		Jordan	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
579	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Liners	CSFN -K. Jones	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 22, 2022	2	Follow Up	Clarification	No	Please confirm that the seepage analysis completed for the LGO were incorporated into the predictions or that a loading calculation has been completed to assess the impact (spreadsheet or modelled). If these assessments have not been completed, please confirm that costing reflects the placement of the HDPE liner, and or costs associated with potential contingency measures. (Source Comment ID#146)	Results of the seepage analysis conducted with the numerical groundwater model on potential seepage from the LGO stockpile (Section 5.2.4.6 of Appendix 5-F) were incorporated into a water balance model seepage sensitivity as discussed in Section 7.1 of Appendix 5-B of the Application. Loadings associated with the potential seepage pathway from the LGO Stockpile were then subsequently assessed with the water quality model (Scenario 4) as described in Section 4.4 of the water quality model in Appendix 5-D of the Application.		CSFN	KP	Lorax/BWG	Cindy		Ready for Submission	AT, Aug 31	Ready for Publishing
579	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Liners	CSFN -K. Jones	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: The permit should reference the groundwater monitoring plan and a robust trigger action response plan for seepage from the mine site. This plan should be developed and approved prior to mining and referenced in the permit. (Source Comment ID#146)	BWG defers to EMLI and MOE for permit conditions. Please see the Mine Site Water and Discharge Monitoring and Management Plan (MSDP) - Appendix 9-E of the Application: mine site groundwater quality and flow monitoring procedures, including for seeps, are described in detail in Section 7.3.4 of the MSDP. A trigger response plan that is focused on regularly monitored parameters with quick turnaround analysis times relative to specific metrics is expected to be required, as this is a standard condition included in most EMA effluent discharge authorizations. The trigger response plan is expected to be developed prior to construction. Section 11 of the MSDP describes the groundwater components for which triggers will be set – specific to groundwater, these components include groundwater levels and groundwater quality. As stated in the MSDP "Generally, triggers related to groundwater quantity will include piezometric elevations in monitoring wells and standpipe piezometers. Groundwater quantity triggers will also consider groundwater and seepage quality indicators, since changes in quality may be indications of increased seepage rates".		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, Oct 21	Ready for Publishing
580	Chapter 5: Modelling, Mitigation and Discharges	Numerical Groundwater Quality Modelling Report – Baseflow Estimates	CSFN	Jordan Zak, M.Sc., P.Geo.; Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Clarification	No	The report indicates that "Reductions in streamflow in tributaries to the Backwater River are not expected. Streamflows in the Creek 661 catchment are predicted to decrease by approximately 5 L/s attributed to dewatering activity in Operations. Groundwater drawdowns in the Davidson Creek catchment are predicted to extend approximately 700 m north toward the TSF. The WMP and TSF already capture and prevent surface flows from contributing to Davidson Creek so no additional impacts to baseflows are predicted in Davidson Creek as a result of open pit dewatering". Clarification: Please confirm these estimates are similar to estimates in the Water Balance. (Source Comment ID#147)	As discussed in the response to Comment 576, the baseflow reductions predicted with the groundwater model and consistent with the values in the water balance model in Creek 661. Similarly, no baseflow reductions attributed to pit development extend beyond the TSF in the water balance model, consistent with the groundwater model. The Blackwater River catchment is not included in the water balance model.		CSFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
581	Chapter 5: Modelling, Mitigation and Discharges	EMA Permit for Construction and Operations Phases	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Recommendation	No	BW Gold has developed the draft Joint Mines Act / Environmental Management Act Permits Application for the Construction and Operations phases of the project only. BW Gold is requesting that a new application (or amendment to this application) be considered for the Closure/Post-Closure phase at a later date. This approach is unacceptable as it may lead to the need for discharging degraded waters into the receiving environment that likely pose unacceptable risks to the environment. More specifically, the 95th percentile Base Case results from the water quality model, presented in Appendix 5-D, for surface waters downstream of the Project shows occasionally exceedances of some long- and short-term BC water quality guidelines (WQGs), long-term CCME WQGs, and/or Yinka Dene water quality standards (YD-WQSs) during the Closure and Post-Closure phases. In addition, the mean Base Case results show occasional exceedances of dissolved cadmium and total zinc long-term BC WQGs in Davidson Creek during the Closure and Post-Closure Phases. Recommendation: The draft Joint Mines Act / Environmental Management Act Permits Application should be revised to apply to all phases of mine life and detail appropriate mitigations for managing the predicted exceedances of WQGs and YD-WQSs during the closure and post-closure period. (Source Comment ID#148)	During IRT development, the temporal scope of the Joint Mines Act / EMA permits application was agreed to include the Construction and Operations phases. That said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
582	Chapter 5: Modelling, Mitigation and Discharges	Instream Flow Needs for Davidson Creek	CSFN	Palmer	Jun 02, 2022	1	New	Information Requirement	No	Table 5.3-8 provides the mean stanza-based instream flow needs (IFNs) for Davidson Creek; however the supporting documentation for the proposed IFNs does not appear to be included in the Application. Information Request: Please provide a copy of Palmer (2020) for review. Also please express the stanza-based mean IFNs as both L/s and % of baseline flows over the same stanzas. (Source Comment ID#149)	The IFN for Davidson Creek is presented in the attached summary table, along with the long-term mean discharge for each stanza. Further information regarding how the IFN was determined is provided in Attachment "R1_CSFN Comment ID 582.pdf"	ERM	CSFN	Palmer			TD	Ready for Submission	TD, Jun 28	Ready for Publishing
583	Chapter 5: Modelling, Mitigation and Discharges	Instream Flow Needs Targets	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 5.3.3.2 provides the results of the simulated streamflow for the base case and mine phases. Instream flow need targets, that will be assessed at H2B (Figure 5.3-13), are not shown. This is a gap in demonstrating how the IFNs will be met in each phase of the mine. Recommendation: Please include IFNs on Figure 5.3-13 to demonstrate whether the IFNs will be met during each phase of mine life. In addition, please clarify if the late operations and closure predicted stream flows for H2B are consistent with the target IFNs. (Source Comment ID#150)	Please see attachment "R1_CSFN Comment IDs 498 506 583.pdf".		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing

583	Chapter 5: Modelling, Mitigation and Discharges	Instream Flow Needs Targets	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Aug 11, 2022	2	Follow Up	Recommendation	No	Thank you for providing the requested information. It is noted that post-closure streamflows may be below IFNs and baseline streamflows. In response to ITT ID #506, the authors suggest that mitigations during the post-closure phase would be considered to augment streamflows above the natural range. Is there sufficient information, at this time, to describe what sources of water would be relied upon to augment flows? If so, please provide this information along with any risks with the potential mitigations with respect to water quality. (Source Comment ID#150)	Specific flow augmentation mitigations to employ during the Post-Closure phase have not been developed at this time. As noted in the Round 1 response, results of the ongoing monitoring will be used to inform adaptive management strategies during mine development, operations, and the closure periods to prevent significant adverse effects to fish or fish habitat. Additional active management of flows, if deemed necessary following the multi-decade monitoring and assessment, could include some of those employed during the Operations and Closure phases, such as storing water and actively releasing to Davidson Creek when required.		CSFN	KP		Cindy	TD	Ready for Submission	TD, Aug 15	Ready for Publishing
583	Chapter 5: Modelling, Mitigation and Discharges	Instream Flow Needs Targets	CSFN (Jesse Sinclair)	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommendation	No	Recommendation: Thank you for the response. If monitored flows will be tracked in the AEMP, then this comment can be closed. (Source Comment ID#150)	Streamflow monitoring will be tracked in the AEMP and is described in Section 4.3 of the AEMP: monitoring will be conducted at several sites in the project area, including station H2B (new site code DC-05). Section 5 of the AEMP outlines the Trigger Action Response Plan. Station DC-05 in upper Davidson Creek is considered the point of compliance at which water flows are expected to meet IFN.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, Oct 19	Ready for Publishing
584	Chapter 5: Modelling, Mitigation and Discharges	Seepage and Collection Channels	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 5.3.5.3 describes the Simulated Mine Site Water Management. On page 5-73 (Figure 5.3-37), the annual water sources to the water management pond (WMP) are shown, but seepage rates from lower waste stock pile, upper waste stockpile, and the associated collection channels are not shown (see Section 5.3.3.7 for description of water sources to the WMP). The proportion of inflows attributed to seepage is uncertain. Recommendation: Please include the estimated inflows due to seepage and collection channels from the upper and lower waste stockpiles. (Source Comment ID#151)	Please see attachment "R1_CSFN Comment IDs 507 584.pdf"		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
585	Chapter 5: Modelling, Mitigation and Discharges	Source of Ammonia	CSFN	Colin Fraser, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	It is unclear what the source of ammonia is in the freshwater reservoir (FWR) during later operations and closure. Based on the schematics provided in 5.3-8 and 5.3-9 the main sources are catchment runoff (in operations) and the WMP (operations and closure). Recommendation: Please describe the source of ammonia in the FWR in late operations and closure (Source Comment ID#152)	Figure 5.3-8 and Figure 5.3-9 are simplified water balance diagrams for the Operations and Closure periods and do not capture the full detail built into the site-wide water balance and water quality models. For a more detailed discussion on water and load balance modelling at the WMP and FWR, the reader is directed to Lorax (2021), Section 3.3.9 and Section 3.3.10. Of note, source chemistries are assigned to roughly a dozen LOM WBM inflow and outflow terms to predict water quality concentrations and loads at the WMP (Lorax 2021, Table 3-22). Time series plots showing dominant inflows and outflows to the WMP are also provided in Lorax (2021). While a considerable portion of the water directed to the WMP is background/non-contact flow; contact waters also report to this facility, including unrecoverable seepages from the Waste Stockpiles; effluent from the Metals WTP (Operations) and effluent from the Membrane WTP (Operations). The dominant outflow from the WMP is water that is pumped to the FWR. Regarding sources of nitrate by Project phase, there is a nitrate signature evident at WMP and FWR between years 2024 and 2042 that corresponds to the Operations period. Two nitrate sources dominate the load signature at WMP, which then reports to FWR: effluent from the Metals WTP (Operations); and effluent from the Membrane WTP (Operations). Reference: Lorax Environmental Services Ltd. (Lorax). 2021. Blackwater Gold Project: Water Balance and Water Quality Model Report. Rev F. November 24, 2021. 1053 pp.		CSFN	Lorax		Colin	GM	Ready for Submission	GM; June 21	Ready for Publishing
586	Chapter 5: Modelling, Mitigation and Discharges	Short-Term Exceedances	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	In Section 5.4.10.2, it is stated that “minor exceedances for some parameters are observed in Closure / Post-Closure, with factors of exceedance generally within a factor of 2 of the screening value.” Table 5.4-5 and 5.4-6 show exceedances of the short-term water quality guidelines (WQGs) for cadmium. The short-term guidelines represent risk thresholds for lethality during short-term exposure (i.e.., less than 96-hr) and should not be used as screening thresholds. Recommendation: Please provide a water management scenario with clear mitigations that could be implemented to reduce projected concentrations to below short-term WQGs. It is not acceptable to provide a discharge scenario with concentrations above short-term WQGs in the receiving environment. (Source Comment ID#153)	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Version 13e water quality predictions were presented to EMLI, ENV and First Nations technical consultants on June 15, 2022, and are summarized in Lorax (2022). References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		CSFN	Lorax		Meghan	GM	Ready for Submission	TD, Jun 28	Ready for Publishing
587	Chapter 5: Modelling, Mitigation and Discharges	Discharge Limits	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	Tables 5.8-9 and 5.8-10 provide proposed permit limits for the Camp Site and Plant Site Sediment Control Pond Discharge and for the downstream aggregate borrow area sediment control pond, respectively. The proposed permit limits for total arsenic, dissolved cadmium, dissolved copper, total manganese, and total zinc exceed the short-term BC WQG for the protection of aquatic life. Discharge limits should not reflect concentrations that have the potential to result in acute toxicity. No information is provided that would demonstrate that this effluent mixture would not result in acute toxicity if effluent concentrations achieved the upper-case predictions. Recommendation: Please propose permit limits that are below short-term WQGs and that can be demonstrated to not result in acute toxicity if realized in the effluent mixture. For example, short-term toxicity tests with the rainbow trout and Daphnia magna could be conducted in simulated effluents to support the application. (Source Comment ID#154)	This recommendation is acknowledged. It is noted that the predicted water qualities for the SCPs presented in Section 5.8 of the Application represent preliminary, conservative estimates. The design of the SCPs is ongoing and the quality of discharge will be dependent on the final materials used within the catchment of each SCP. Refinement of the predicted discharge quality is ongoing. Management options exist for the small volume of water anticipated to occur in SCPs should this water be unacceptable for discharge (e.g., pump system or trucking to the WTP). It is also noted that, since the Application, changes to the SCP discharge configuration have occurred (BW Gold Ltd. 2022); most notably, the Plant Site SCP is no longer anticipated to produce a surface discharge. Discharge from the Camp Site SCP is anticipated to occur in Year -1, approximately one year later than presented in the Application.		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 28	Ready for Publishing
587	Chapter 5: Modelling, Mitigation and Discharges	Discharge Limits	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Aug 11, 2022	2	Follow Up	Recommendation	No	Please provide the time-frame in which refined predicted discharges will be available to inform permit limits. (Source Comment ID#154)	BW Gold will provide a response to comments related to the SCPs in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		CSFN	Lorax		Meghan		Ready for Submission	GM; Aug 16	Ready for Publishing

	Chapter 5: Modelling, Mitigation and Discharges	Discharge Limits	CSFN (Jesse Sinclair)	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	The reviewer has reviewed the files R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf and R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097_AppendixA.xlsx. The authorization for discharges from the Camp Site SCP is being removed from the current permit. However, the proposed permit limits for the Downstream Aggregate Borrow Area SCP are ambiguous. The authors provide a series of recommendations to reduce uncertainty in any proposed permit limits and appear to suggest that the short-term BC WQGs, approved SBEBs, and the MDMER TSS limit be used as interim permit limits. The authors further suggest that meeting these benchmarks should be sufficient, from a water quality perspective, for water collected in the SCP to be discharged. The accompanying condition of no acute toxicity to Daphnia magna and rainbow trout are not mentioned, but must be met as a condition of release from the reviewer's perspective. The reviewer suggests the proposed recommendations be considered as permit conditions, subject to the resolution of the one recommendation below. Recommended Permit Condition: The recommendations provided in R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf should become permit conditions that must be fulfilled as a condition of release from the Downstream Aggregate Borrow Area SCP, subject to the resolution of the comment below. Recommendation: The toxicity tests stated in Recommendation 2 (section 4.2.2 of R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf) are proposed to be spiked with cadmium and zinc. However, there are a few predicted water quality parameters that are near or above the BC WQGs, such as copper and arsenic. The reviewer recommends that the spiked tests include arsenic, cadmium, copper, and zinc at concentrations in the revised Upper-Case predictions. (Source Comment ID#154)	Thank you for the response. We agree *Daphnia magna* and rainbow trout acute toxicity testing should be included as a condition of Downstream Aggregate Borrow Area SCP discharge. *D. magna* and rainbow trout acute toxicity tests are proposed for SCP discharge in the Application (Table 5.8-11 of Section 5.8 of the Joint Permit Application). The omission of these proposed requirements from "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" was an oversight. Regarding the reviewer's Recommended Permit Condition: this comment is acknowledged. We recommend one clarification to the proposed condition in that the recommendations presented in "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" do not need to be fulfilled in order for the SCP to discharge if the water contains parameter concentrations equal to or below BC WQGs. Regarding the reviewer's Recommendation: we acknowledge SCP discharge may contain a mixture of parameters, and parameter mixtures have the potential to result in synergistic or antagonistic effects beyond those observed in toxicity tests of individual parameters. However, single parameter toxicity tests are recommended in "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" to allow for the development of quantitative dose-effect curves for Cd and for Zn (e.g., to allow the test parameter to be available for uptake with limited confounding factors present, such as other metals). The quantitative dose-effect curves are important as they will form the basis for SCP discharge limits, which will be established for individual parameters. Further, the information gained from a toxicity test spiked with a parameter mixture (e.g., metals) is limited to the specific conditions, and parameter concentrations and ratios used in that particular test, whereas nearly infinite combinations of parameter concentrations and ratios may occur in the SCP. Therefore, a multi-toxicant toxicity test representing SCP effluent is not recommended by BW Gold at this time.		CSFN	Lorax		Meghan	GM	07-Nov-22	GM; Oct 31	Ready for Publishing
587	Chapter 5: Modelling, Mitigation and Discharges	Discharge Limits	CSFN (Jesse Sinclair)	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up	Recommended Permit Condition	Yes	Thank you for the response. If I understand the response related to including the recommendations in "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" correctly, the Proponent is proposing to complete the recommendations only if effluent quality exceeds BC WQGs. I would argue that recommendations #1 and #2 should be completed regardless of effluent quality conditions as both recommendations will provide the basis for Permit Limits that are achievable and protective. I do agree that recommendation #3 can be responsive. I agree with the Proponent's response regarding the other recommendation for multi-parameter testing and acknowledge this will be a condition of release (i.e., acute toxicity testing and demonstration of non-lethality).	Thank you for the response and we look forward to discussing this comment in a meeting if necessary. The intent of the statement in the previous response ("...the recommendations presented in "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" do not need to be fulfilled in order for the SCP to discharge if the water contains parameter concentrations equal to or below BC WQGs.") is to allow BW Gold the flexibility to discharge SCP water if necessary and if demonstrated to contain parameter concentrations below WQGs and SBEBs in the event that toxicity tests, per Recommendation #2, are delayed or that final test results have not yet been issued. This is intent is perhaps more clearly worded in "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" (wording copied below) and we apologize for the confusion this may have caused:		CSFN	Lorax				Dec. 19	TD, Dec 19	Ready for Publishing
588	Chapter 6: Environmental Assessment Predictions	Complete Effects Assessment	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	BW Gold has developed the draft Joint Mines Act / Environmental Management Act Permits Application for the Construction and Operations phases of the project only. The effects assessment in Chapter 6 should be updated to include a complete effects assessment. As mentioned above, water quality modelling results for surface waters downstream of the Project are projected to occasionally exceed some long-term and short-term BC water quality guidelines (WQGs), long-term CCME WQGs, and/or Yinka Dene water quality standards (WQSs) during the Closure and Post-Closure phases. The full extent of the potential effects on aquatic receptors during these phases is not adequately characterized in the draft Joint Mines Act / Environmental Management Act Permits Application. Recommendation: Please update Chapter 6 to include a complete effects assessment that characterizes impacts to receptors through all phases of mine life. (Source Comment ID#155)	Please refer to comment response #102.		CSFN	Lorax	Entia		GM	Ready for Submission	GM; June 28	Ready for Publishing
588	Chapter 6: Environmental Assessment Predictions	Complete Effects Assessment	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Aug 11, 2022	2	Follow Up	Recommendation	No	Thank you. I have reviewed the response to ENV comment (ITT ID #102) and acknowledge that projected exceedances of the WQGs noted above have largely been resolved in the closure and post-closure project phases. However, effects related to exceedances of the long-term WQG for zinc in Creek 661 are not described. While I acknowledge that the IRT process defined the scope of the MA/EMA application as the construction and operation phase, risks that extend into closure and post-closure should be characterized so that CSFN has a comprehensive understanding of potential effects over the entire life of the project. (Source Comment ID#155)	The predicted exceedances of the long-term WQG for T-Zn in Creek 661 are driven by the January model background term for WQ5 rather than Project discharges. As such, the Zn exceedances noted occur in all model phases, from the "Pre-Construction" phase (2007 to 2022, representing model output in the absence of Project development) through the Post-Closure phase. Please refer to Section 2.2.2.2 of the below memo generated for Round 1 Comment 99 for further information: Memo: R1_ENV Comment ID 99.pdf Appendix: R1_ENV Comment ID 99 Appendix B.xlsx It is noted the Zn discussion presented in Section 2.2.2.2 of the above memo is focused on the Construction and Operation phases. Therefore, please consider the below January maximum predicted concentrations for total Zn for the Closure and Post-Closure phases (v13e water balance/water quality model; 95th percentile concentrations): January background model term: 0.0281 mg/L WQ5 predicted January maximum in Closure: 0.0277 mg/L WQ5 predicted January maximum in Post-Closure: 0.0279 mg/L		CSFN	Lorax	Entia			Ready for Submission	GM; Aug 16	Ready for Publishing
589	Chapter 6: Environmental Assessment Predictions	Characterization of Risks	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 6.3.2 on Project Interactions with Aquatic Resources does not include an evaluation of interactions for the Closure and Post-Closure periods. This is rationalized by stating that an effluent discharge permit is sought only for the Construction and Operations periods. The results of water quality modeling (presented in Chapter 5) show that concentrations of total mercury, total antimony, and dissolved cadmium will exceed short-term and long-term water quality guidelines in Davidson Creek; and total zinc will exceed long-term water quality guidelines in Creek 661. The estimated residual effects of these exceedances should be characterized at this time to give the reviewers a fulsome understanding of the potential for effects over the life of the project. Recommendation: We recommend that the residual effects assessment include a characterization of risks to aquatic biota from effluent discharges over the life of the project. (Source Comment ID#156)	Please refer to comment response #102.		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 28	Ready for Publishing
589	Chapter 6: Environmental Assessment Predictions	Characterization of Risks	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Aug 11, 2022	2	Follow Up	Recommendation	No	Please refer to the reviewer's Round 2 comment under comment #155.[ITT Comment #588] (Source Comment ID#156)	Please refer to the response under ITT Comment #588.		CSFN	Lorax		Meghan		Ready for Submission	GM; Aug 16	Ready for Publishing
590	Chapter 7: Environmental Monitoring	Waste Rock Dump Seepage Monitoring	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada	Jun 02, 2022	1	New	Information Requirement	No	One of the programs must be a waste rock dump seepage monitoring program to monitor change in oxidation products coming off the dumps, referencing humidity cells and seep monitoring. (Source Comment ID#157)	Section 7.2 of Chapter 7 identifies seepage surveys to be conducted as part of the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). Seep surveys will also be conducted during construction and operations to enhance the understanding of groundwater flow in the Project area and, specifically, down-gradient of the TSF, stockpiles and the Pit Lake, and to identify potential pathways for seepage from these facilities. Seep monitoring will include descriptions of seeps and waterbodies		CSFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing

591	Chapter 8: Health and Safety	Occupational Health and Safety – CSFNs	CSFN	Lesley Shelley, Ph.D., R.P.Bio, Entia Environmental Consultants	Jun 02, 2022	1	New	Information Requirement	No	The Application must include an initial occupational health risk assessment, developed by a qualified person which considers anticipated physical, chemical, biological, and ergonomic hazards and strategies to minimize and control those hazards. Identify information sources used to inform this assessment. This should consider construction and operation activities. (Source Comment ID#158)	A preliminary Occupational Health and Safety Risk is included as Appendix 8-A of the joint application. As stated in section 8.5.1 of the joint application, at the current stage of Project design, a detailed OHS risk assessment is not yet possible. Section 8.5 of the joint application sets out the framework by which the risk assessment will occur at the appropriate time.		CSFN	ERM		Lesley	RT	Ready for Submission	RT; June 27	Ready for Publishing
592	Chapter 8: Health and Safety	Advanced Training for Employees Working with Cyanide or Responding to Cyanide Incidents	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Information Requirement	No	A main objective of the OHSP is to ensure employees and contractors are trained to carry out their jobs safely and productively. Preliminary training requirements for employees with different roles and responsibilities are listed in Appendix C. However, the only training related to cyanide listed is the general Cyanide Hazard Awareness training for all employees. Considering that cyanide is a major risk to health and safety, the OHSP must include more advanced training for employees working with cyanide or responding to cyanide incidents related to the use, transportation, and storage of cyanide reagents. Such staff includes workers in the mill/cyanidation plant, those involved in transport/handling of cyanide deliveries to the site, and any employee with Health and Safety responsibilities above and beyond what is expected of all staff. Information Request: Please include advanced and job-specific training for employees dealing with different aspects of cyanide reagents storage, usage, transportation and incidents. (Source Comment ID#159)	Section 8.1.1 of the Occupational Health and Safety Plan refers to the Blackwater Cyanide Management Plan (CMP; Appendix A of Appendix 9-M), which details the cyanide training requirements specific to employees and contractors that are required to perform work in the mill (Section 10.1 of CMP). Section 10.2 of the CMP details the training required for workers to perform their normal production tasks, including unloading, mixing, production and maintenance, with minimum risk to worker health and safety and in a manner that prevents unplanned cyanide releases. Section 10.3 of the CMP details the training requirements for all cyanide unloading, mixing, production and maintenance personnel. Section 9.1 of the CMP includes an emergency response plan for cyanide release. Transportation requirements are outlined in Sections 4 and 5 of the CMP.		CSFN	ERM		Tonia	RT	Ready for Submission	RT; June 27	Ready for Publishing
593	Chapter 8: Health and Safety	On-Site Health and Medical Protocols and Services	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	As a condition of the Environmental Assessment Certificate (EAC) and a condition of the Decision Statement for the Blackwater project, disease and infection prevention, health promotion and worker wellness must be achieved through communication and coordination with Northern Health, BC Ambulance Services and local health service providers. Section 8.7.2 of the OHSP states that Artemis Gold expects these services will be available but does not provide any information as to how and through what sources on-site health and medical protocols will be implemented. Recommendation: Please include in the OHSP a description of how and through what sources the on-site health and safety protocols will be implemented. (Source Comment ID#160)	A separate Health and Medical Service Plan (HMSP) has been developed to outline the on-site medical services and programs to be delivered for the Project workforce and describe the measures to coordinate health service delivery with Northern Health. The HMSP is a requirement and forms part of the overall Blackwater Gold Mine Emergency Response Plan and addresses Condition 40 of the Environmental Assessment Certificate #M19 01. The plan was developed in consultation with Northern Health, Indigenous nations, the District of Vanderhoof, and the Village of Fraser Lake. The plan was then submitted to the EAO and to the aforementioned parties for review more than 60 days prior to the planned commencement of Construction.		CSFN	ERM		Tonia	RT	Ready for Submission	RT; June 27	Ready for Publishing
594	Chapter 9: Management Plans	Nitrogen Management Plan	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The application must include a nitrogen management plan covering management of nitrogen species in contact water including both blasting residue as well as nitrogen species from cyanide and cyanide destruction. Recommendation: Please refer to Source's memo titled 220131 – Blackwater Nitrogen Reconciliation Plan.docx, provided through email to the Artemis team on February 2, 2022, for clarification and guidance on CSFN's expectations for a Nitrogen Reconciliation Plan. (Source Comment ID#161)	This comment was raised by CSFN during pre-application review of the Cyanide Management Plan on July 21, 2021. BW Gold responded and updated the Cyanide Management Plan to include the following: *As per section 6.4, BW Gold will comply with the ICMC requirement of ensuring that all TSF pond waters and effluent discharge contain < 50 ppm CN-WAD.* *Section 6.4 revised to state: Furthermore, process and receiving water quality sampling and analysis requirements are detailed in the Mine Site Water Monitoring and Discharge Plan (MSWDP) and the Aquatic Effects Monitoring Plan (AEMP). Actual cyanide concentrations in the TSF ponds (C,D) and process plant process water streams will be compared to predictions and actual cyanide consumption and opportunities to reduce cyanide consumption will be identified through plant optimization and ramp-up. This will be reported on through the annual EMA and ARR provincial annual reports.* *6 months prior to development of the first EMA report for the site in the year that cyanide is first used on site, Artemis will provide to the Nations, an annual report template for the section on cyanide and* ***nitrate*** *with cyanide/* ***nitrogen species*** *to ensure the correct parameters and graphs will be included.* Furthermore, the membrane treatment plant selected by BW Gold has been designed to treat nitrogen species prior to release of effluent to the FWR and, ultimately, the receiving environment. Furthermore, monitoring of nitrogen species is also included in all contact water management sources on site through the Ch 9-E - Mine Site Water and Discharge Monitoring Plan (MSDP). Moreover, nitrogen species will be monitored in all receiving waters in accordance with the Chapter 7-A - Aquatic Effects Monitoring Program (AEMP) Plan. Consequently, BW Gold respectfully disagrees with the reviewer that a Nitrogen Management Plan is required for the project.		CSFN	ERM		Rolf	RT	Ready for Submission	AT, June 27 Response provided by TD, June 28	Ready for Publishing

594	Chapter 9: Management Plans	Nitrogen Management Plan	CSFN - P. Littlejohn,	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Aug 22, 2022	2	Follow Up	Recommended Permit Condition	Yes	This comment is also relevant to comment #162 (ITT ID 595). The key aspect of the CSFN team's original comments is the reconciliation of predicted versus actual levels of N species and sulphate in mine contact water and the predicted versus actual levels of removal achieved by the water treatment plant. These species can be difficult to model accurately and so the intent of our original comment was to watch for deviations from predictions proactively. Recommended Permit Condition: A commitment from BW Gold to reconcile predicted versus actual levels of N species and SO4 in mine contact water and treated effluent, supported by a permit condition requiring annual reporting on this reconciliation, addresses this risk without need for a N/SO4 management plan. If BW Gold and EMLI support this approach, then this comment can be resolved by mitigating risk through a permit condition. (Source Comment ID#161)	This commitment and requirement has already been incorporated into the reporting out on the the Cyanide Management Plan, Mine Site Water Management Plan and Aquatic Effects Management Plan as per our previous response to round 1 comment 594. BW Gold supports this condition being reported out on through the above noted plans.		CSFN	BWG	ERM			Ready for Submission	TD, Aug 24	Ready for Publishing
594	Chapter 9: Management Plans	Nitrogen Management Plan	CSFN - P. Littlejohn,	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Acknowledged. Please carry the reviewer's Round 2 comment forward as a permit condition.(Source Comment ID#161)	This commitment and requirement has already been incorporated into the reporting out on the the Cyanide Management Plan, Mine Site Water Management Plan and Aquatic Effects Management Plan as per our previous response to round 1 comment 594. BW Gold supports the reconciliation of predicted versus actual levels of N species and sulphate in mine contact water and the predicted versus actual levels of removal		CSFN	BWG	ERM	Travis			TD, Oct 17	Ready for Publishing
595	Chapter 9: Management Plans	Sulphate Management Plan	CSFN	BW Gold Ltd.	Jun 02, 2022	1	New	Information Requirement	Yes	A sulphate management plan must be developed. Sulphate is a key contaminant of concern for the project and is an important driver of water treatment and discharge in operations and closure/post-closure and so development of a sulphate management plan is warranted. Recommended Permit Condition: A permit condition is required to develop a Sulphate Management Plan. The Plan must include inventory tracking, the amount of sulphate present in mine water year-to-year, annual reporting, reconciliation between the WQ model and actual WQ, adaptive management/monitoring triggers, etc... (Source Comment ID#162)	The membrane treatment plant selected by BW Gold has been designed to treat sulphate prior to release of effluent to the FWR and, ultimately, the receiving environment. Furthermore, monitoring of sulphate is also included in all contact water management sources on site through the Ch 9-E - Mine Site Water and Discharge Monitoring Plan (MSDP). Moreover, sulphate will be monitored in all receiving waters in accordance with the Chapter 7-A - Aquatic Effects Monitoring Program (AEMP) Plan. Consequently, BW Gold respectfully disagrees with the reviewer that an SO4 MP is required for the project.		CSFN	BWG	BW Gold	Travis	TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
595	Chapter 9: Management Plans	Sulphate Management Plan	CSFN -K. Jones	BW Gold Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	Yes	Please see the Round 2 comment for comment #161 (ITT ID 594) (Source Comment ID#162)	Please refer to round 2 response to comment 594. Monitoring of sulphate is included for all contact water monitoring and management sources on site through the Ch 9-E - Mine Site Water and Discharge Monitoring Plan (MSDP). Moreover, sulphate will be monitored in all receiving waters in accordance with the Chapter 7-A - Aquatic Effects Monitoring Program (AEMP) Plan. BW Gold supports a condition to report out on sulphate as is already planned under the annual reporting for those plans.		CSFN	BWG	BW Gold	Travis	TD	Ready for Submission	TD, Aug 24	Ready for Publishing
595	Chapter 9: Management Plans	Sulphate Management Plan	CSFN -K. Jones	BW Gold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: A condition of the permit should include target limits for the effluent discharged from the mine site as well as trigger limits as part of the TARP for sulphate.(Source Comment ID#162)	BW Gold ackknowledges the comment and looks forward to discussing draft permit conditions with EMLI, ENV and CSFN during the next phase of the MRC process.		CSFN	BWG	BW Gold	Travis			TD, Oct 17	Ready for Publishing
596	Chapter 9-D: ML./ARD Management Plan	Contingency Treatment for ARD	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The application must include a contingency plan to modify the water treatment plant system to handle large scale onset of ARD. This plan must also include strategies to reduce the risk of impacts from large scale onset of ARD at site in the case that significant acidity develops (i.e.., the TSF becomes acidic). (Source Comment ID#163)	Contingencies and adaptive management actions specific to TSF pond water quality are outlined in Table 11-1 of the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application). If pH instability (i.e.., pH < 6.5) is detected in the TSF ponds, for example, the adaptive management actions include a follow-up investigation and possible additional management (e.g., lime dosing in the mill, adjustments to waste rock flooding schedule, temporary lime addition to re-establish neutral pH conditions in the pond), per Appendix 9-E. This approach is designed to trigger actions prior to the onset of large scale ARD. Therefore, modification of the water treatment plant system to handle large scale onset of ARD is not proposed.		CSFN	Lorax			GM	Ready for Submission	GM; June 29	Ready for Publishing
597	Chapter 9-D: ML./ARD Management Plan	Metal Digestion Method	CSFN	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Clarification	No	Solid content concentrations can be evaluated using various digestion methods, such as the multi acid digestion method or the Aqua Regia digestion method. The various methods can impact both the detection limits used to determine if parameters are enriched and the concentration of the parameters. Clarification: Please describe the digestion method that will be used to identify solid metal contents. (Source Comment ID#164)	As stated under Section 7.1.7 of the ML/ARD Management Plan, the aqua regia digestion method will be used for operational monitoring purposes.		CSFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing
598	Chapter 9-D: ML./ARD Management Plan	In-situ Tailings Monitoring	CSFN	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommended Permit Condition	Yes	The plan indicates that opportunistic tailings samples will be collected from the beaches within the TSFs. It is assumed that tailings exposed on the beaches will not be depleted in neutralizing minerals for one year and that acidic conditions will not develop because the tailings will be covered within the one-year timeframe. However, this lag time estimate is only applicable to the tailings used during bench scale testing and is limited to 5 HCT tests. The lag time of these tests is somewhat dependent on the geochemical characteristics of the ore sampled. Due to the limited sample size, the lag times estimate for the tailings samples is subject to uncertainty. Recommended Permit Condition: Please update the ML-ARD management plan to include regular sampling of tailings beach material for tailings for areas that are safe to sample. (Source Comment ID#165)	Given the Health and Safety concerns around accessing freshly deposited tailings beaches, it is believed that the word "opportunistic" reflects the practicality of such sampling campaigns. Depending on access, in-situ tailings beach sampling may become a regular component of the program. The suggested wording change will be considered in the next update of the ML/ARD Management Plan. The prescribed pre-deposition tailings monitoring program will adequately capture the variability of tailings geochemistry and allow the evaluation of kinetic test sample representativeness.		CSFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing

598	Chapter 9-D: ML./ARD Management Plan	In-situ Tailings Monitoring	CSFN -K. Jones	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Recommended Permit Condition	Yes	Thank you for the response. Given the assumptions in the model, it is recommended that a permit condition be developed for beach sampling to be conducted for tailings that are safe to sample and are older than 6 months. The objective will be to identify any localized acidity in the facility and therefore, sampling freshly deposited tailings is not recommended. (Source Comment ID#165)	This recommendation is acknowledged. Please note that opportunistic sampling does not preclude regular sampling. It is BW Gold's intention to sample deposited tailings as regularly as possible, safe access permitting. However, the safety of access to even aged tailings beaches is difficult to predict and as such, a specific sampling frequency has not been proposed in the current version of the ML/ARD Management Plan. The importance of quantifying the kinetic behaviour of deposited, aged tailings to verify source term and water quality model assumptions is recognized.		CSFN	Lorax				Ready for Submission	GM; Aug 30	Ready for Publishing
598	Chapter 9-D: ML./ARD Management Plan	In-situ Tailings Monitoring	CSFN -K. Jones	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up		Yes	Thanks. To clarify, the previous comment was in reference to additional composite sampling - not to the regular sampling outlined in the ML/ARD Management Plan which continues to be supported. The ML/ARD management plan should include sampling of deposited beach tailings unless unsafe to do so, with documented justification for safety concerns.(Source Comment ID#165)	The comment is acknowledged and updates to the ML/ARD Management Plan will be made in the next document version as necessary.		CSFN	Lorax					GM; Oct 17	Ready for Publishing
599	Chapter 9-D: ML./ARD Management Plan	Tailings Sampling	CSFN	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Four tailings samples will be collected per quarter. It is understood that the tailings will largely be PAG and managed as PAG; however, it is useful to understand variability in the tailings. Information Request: Please provide a discussion of why daily samples will not be collected to create monthly composite samples, for comparison to the grab samples, particularly during periods of LGO mining. (Source Comment ID#166)	The proposed sampling frequency will collect 20 samples per year, which would provide information on the geochemical heterogeneity of tailings being deposited in the TSF. Monthly composite samples would provide better information on average tailings composition, but would not provide as much detail on tailings variability. Adjustments to the sampling frequency and methodology will be considered in the next update to the ML/ARD Management Plan.		CSFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing
599	Chapter 9-D: ML./ARD Management Plan	Tailings Sampling	CSFN -K. Jones	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	Yes	Please confirm the number of samples that will be collected per quarter. A composite sample will be valuable to determine the representativeness of the grab samples. If the variability of the samples is low, a composite sample may not be required. Beach sampling will be a better measure of the potential for acid generation in the field. As indicated in the Round 2 response to comment #165 (ITT ID 598), beach sampling is recommended as a potential permit condition. (Source Comment ID#166)	As outlined in the ML/ARD Management Plan (Table 7.1-1), a total of five fresh tailings and associated supernatant samples will be collected per quarter from a suitable sampling port within the mill. The importance of quantifying the kinetic behaviour of deposited, aged tailings to verify source term and water quality model assumptions is recognized.		CSFN	Lorax				Ready for Submission	GM; Aug 30	Ready for Publishing
600	Chapter 9-D: ML./ARD Management Plan	Sampling Frequency	CSFN	Timo Kirchner, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Confirmatory sampling will be conducted on waste mined at the site. The waste is categorized into four categories, including PAG 1, PAG 2, NAG 3, NAG 4, and NAG 5. The sampling frequency of the waste rock is scheduled to occur on the frequency of 1 sample for 50,000 tonnes of rock. Information Request: Please describe if this sampling frequency will adequately be able to verify the ABA model as well as facilitate adequate rock segregation. Describe measures that will be enacted if confirmatory sampling is inconsistent with the ABA model, capacity requirements for rock storage volumes. (Source Comment ID#167)	Part a: The frequency of 1 sample per 50,000 t of mine rock is considered adequate for monitoring purposes for the following reasons: - The geochemical characteristics of the deposit have been well-defined by a comprehensive pre-mine characterization program which included >1,000 mine rock samples and >285,000 assay samples. - The pre-blast sample will comprise a well-spaced composite which will, in most cases, be representative of a whole mining bench. - By applying geostatistics to this data, a reliable and representative mining model can be created for ARD purposes. - A higher resolution of blast hole samples near boundaries of unique PAG/NAG rock units will be collected and submitted for analysis. Part b: If the confirmatory sampling is inconsistent with the ABA model, the assay proxies will be adjusted based on available data and the block model will be refined using ML/ARD monitoring results. If this results in a higher proportion of PAG waste rock, the design of the PAG storage facilities will be reviewed and adjustments to the mine plan may be made. In addition, source term assumptions and water quality models will be revisited using the revised waste rock estimates. In specific cases, rehandling of misclassified material may be undertaken under the guidance of a QP.		CSFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing
601	Chapter 9-E: Mine Water and Discharge Management Plan	Prepare a TSF Supernatant Water Management Plan	CSFN	Stephanie Eagen, R.P.Bio..; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must include a TSF Supernatant Water Management Plan detailing the procedures for monitoring of liquid levels and seeps, sampling, and analysis of water quality, determining when to divert supernatant to the mine Water Treatment Plant for treatment, and contingency plans including emergency procedures for system malfunctions/upsets and storm events. The Application must also include a water management/treatment plant operating strategy to avoid frequent start/stop of the system. (Source Comment ID#168)	Procedures and locations for monitoring liquid levels and seeps (quantity and quality) for the TSF are included within Appendix 9-E. Section 7.3.2.1 "an OMS manual will be prepared following construction ...to provide comprehensive operating instructions and monitoring frequencies and will identify how and when water will be pumped to the membrane WTP". Non-conformities and corrective actions are outlined in Section 11 of Appendix 9-E. As outlined in Table 11-1 in Appendix 9-E, tier-based operational instructions will be included in the OMS manual that will provide threshold values and response plans for instances when the TSF pond volume exceeds the needs of mine operations. WTP maintenance activities are described in Section 8 of Appendix 5-H, including procedures to start up and shut down the plant: and OMS manual will be prepared following selection and purchase of equipment (BQE, 2022).		CSFN	KP		Greg	AT/KP	Ready for Submission	AT, June 28	Ready for Publishing
601	Chapter 9-E: Mine Water and Discharge Management Plan	Prepare a TSF Supernatant Water Management Plan	CSFN - P. Littlejohn,	Stephanie Eagen, R.P.Bio..; Dan Fontaine, P.Eng., Knight Piésold Ltd.	Aug 22, 2022	2	Follow Up	Recommendation	No	Differences between how TSF-C and TSF-D will be operated warrant creation of an OMS manual for each facility. Please see comment #21 (ITT ID 453) from CSFN's first batch of Round 2 comments (memo titled 220808 Source Round 2 Detailed Comments on the Blackwater Major Works Application (Batch 2A)) for recommendations on the OMS manuals for TSF-C and TSF-D. CSFN request to be engaged in the development of these manuals. (Source Comment ID#168)	As noted in the response to comment 453 (R1), monitoring and operational requirements related to the TSF are summarized in Section 9 of Appendix 3-K of the Application. These preliminary operations and monitoring requirements will be incorporated into Operations, Maintenance and Surveillance (OMS) Manual following construction of TSF C along with other pertinent content. The OMS Manual will be reviewed annually and updated as required during progressive development of the TSF. It will incorporate requirements for TSF D once it is constructed. Development of an OMS Manual for a TSF is a Code requirement (10.5.2). It must be reviewed by the Engineer of Record (EOR) for the TSF, and approved by the Mine Manager. BW Gold acknowledges the CSFN request to be engaged in the development of the OMS Manual for the TSF.		CSFN	KP			AT	Ready for Submission	AT, Aug 31	Ready for Publishing
601	Chapter 9-E: Mine Water and Discharge Management Plan	Prepare a TSF Supernatant Water Management Plan	CSFN - P. Littlejohn,	Stephanie Eagen, R.P.Bio..; Dan Fontaine, P.Eng., Knight Piésold Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Acknowledged. The reviewer recommends capturing the requirement to engage with CSFN on the TSF OMS as a permit condition. For more detail on recommended permit conditions for the OMS, please refer to CSFN's comments under ITT ID 453 for Round 3. (Source Comment ID#168)	BW Gold acknowledges this comment and has referred to comment ID 453 for further discussion of the topic.		CSFN	KP		Dan	AT/KP	Ready for Submission	At, Oct26	Ready for Publishing

602	Chapter 9-E: Mine Water and Discharge Management Plan	Balance Flows	CSFN	Stephanie Eagen, R.P.Bio..; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must contain the optimization plan for the water taking and flow augmentation. As agreed during the EA process, permitting will need to balance the reduction of flows in upper Chedakuz Creek and augmented flow to Davidson Creek (as the balancing of flows to the two creeks was not completed). (Source Comment ID#169)	Palmer (Application for a Fisheries Act Authorization 2021) assessed flow changes in Chedakuz Creek resulting from the use of the FWSS to augment flow in Davidson Creek. Palmer concluded: "During Operations and Closure phases when the FWSS is operating, flows in lower Chedakuz Creek will be reduced, particularly between Tatelkuz Lake and the confluence with Davidson Creek (a 900 m section). Hydrological modelling completed during the EA indicated this withdrawal will result in the maximum reduction of 2% in rainbow trout spawning habitat in spring; an increase in total rainbow trout fry rearing habitat in summer and fall; and no more than 2% reduction in juvenile rainbow trout rearing and kokanee spawning habitat. In winter the physical change in the creek depth is a reduction of 2-3 centimetres (cm) in a wide and deep channel." Palmer (2021) further notes: "since 2015, the baseline hydrology has been updated and the mine plan now proposes to divert more runoff that originates in the upper portion of the Davidson Creek catchment around the TSF, increase water recycled on site and treat and discharge water from the start of Operations. These changes result in more water originating from the upper portions of Davidson Creek to contribute downstream to meet the IFN, thus reducing the demand on the volume of water from Tatelkuz Lake. The increased freshwater diversions reduce the amount of water that will need to be withdrawn from Tatelkuz Lake to support IFN. Given this, and that fact that pumping from Tatelkuz Lake is not planned to commence until Year 6, the previously-analyzed timeseries of habitat conditions from Chedakuz Creek represent a conservative over-estimate of the necessary withdrawals from Tatelkuz Lake, and subsequently, the actual habitat losses in Chedakuz Creek." Flows are monitored in the FWR to track release of IFN releases into Davidson Creek. The FWSS flow monitoring systems are described in the Water Management Structures Detailed Design Report (Appendix 3-O). The FWR outlet pipes will feed into a Temperature and Flow Control Chamber, and each pipe will be fitted with a main valve and maintenance valve with the ability to regulate flows according to water surface levels and IFN requirements. Ultrasonic flow meters will be installed on the pipes upstream of the outlet valves to accurately measure flows for compliance reporting requirements. The FWSS Report (Appendix 3-P) describes the intake in Tatelkuz Lake. The maximum IFN is 0.56 m3/s during the spring; the FWSS will draw water from Tatelkuz Lake through two pipes (for redundancy), which will passively convey water from the lake to a concrete wet well. The intake screen design basis assumption includes a 0.67 m3/s capacity for each screen (20% higher than the maximum IFN). Three vertical turbine pumps within the pump station will provide a total maximum flowrate of 0.67 m3/s . Each of the pumps will be equipped with a variable frequency drive and motor to accommodate variable flow demand.		CSFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
602	Chapter 9-E: Mine Water and Discharge Management Plan	Balance Flows	CSFN	Cindy Starzyk, Ph.D., P.Eng.; Stephanie Eagen, R.P.Bio..; Knight Piésold Ltd.	Aug 08, 2022	2	New	Recommendation	No	BW Gold's response indicates that more water will originate from the upper portions of Davidson Creek to contribute downstream to meet the IFN, thus reducing the demand on the volume of water from Tatelkuz Lake. However, starting from year 7, a significant amount of water is still expected to be withdrawn from Tatelkuz Lake, affecting the flows in upper Chedakuz Creek. It is still unclear if this optimization plan considers flow monitoring in upper Chedakuz Creek to balance the augmented flow to Davidson Creek. Recommendation: Please indicate if the WBM takes into account the updated baseline hydrology since 2015 and the increased amount of runoff diverted from the upper portion of the Davidson Creek catchment around the TSF, among other considerations. These updates should be quantified to accurately assess the flows in upper Chedakuz Creek and augmented flow to Davidson Creek. (Source Comment ID#169)	Yes, the water balance model includes the baseline hydrology updated since 2015. The water balance model is based on baseline watershed modelling that includes hydrology data collected through the end of 2020. The inclusion of the updated hydrology information is presented in the Baseline Watershed Model report (Appendix A of Appendix 5-B of the Application), and the subsequent water balance modelling update to represent the optimized Closure/Post-Closure water management plan (KP, 2022). The water balance model is based on the updated mine plan referenced in the response to the Round 1 comment. This mine plan includes the diversions that originate in the upper portion of the Davidson Creek catchment and direct water around the TSF. The Northern Diversion System directs water to Davidson Creek via the FWR; the Central Diversion System directs water to the WMP and thence to the FWR and Davidson Creek. Predicted streamflows in Davidson Creek and Chedakuz Creek considering the updated mine plan are presented in Appendix 5-B and in KP (2022). Predicted monthly flows and percent change in flow at locations in Davidson Creek and Chedakuz Creek relevant for all phases of mining are presented in Appendices D and E (of KP, 2022). Reference: Knight Piésold Ltd (KP). 2022. Blackwater Gold Project - Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization. Included as an attachment to BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, Aug 14	Ready for Publishing
603	Chapter 9-E: Mine Water and Discharge Management Plan	Pumping of Tatelkuz Lake to Davidson Creek	CSFN	Palmer	Jun 02, 2022	1	New	Information Requirement	No	Develop additional project design and planning to minimize pumping of Tatelkuz Lake to Davidson Creek. The proposed pumping of water from Tatelkuz Lake to make up flow in Davidson Creek could impact aquatic habitat in Tatelkuz Lake and the downstream environment. Alternative solutions to these issues should be explored before committing to water withdrawal from Tatelkuz Lake. In addition, the application must clarify proposed long-term water taking from the lake is only for the Operational Phase. The submitted plan must include the process for and successes/ challenges with the collaborative development of this plan. (Source Comment ID#170)	Long-term water withdrawal from Tatelkuz Lake is proposed from Year 6 of Operations through to the end of Closure. This timeline will be clarified in the text. Long-term water withdrawal from Tatelkuz Lake is not predicted to have a significant effect on water surface elevation (i.e.., indistinguishable from natural variation) based on water modelling. Section 5.3.9..4.5 Reduction in Littoral Fish Habitat of Tatelkuz Lake of the EIS/Application states that "The magnitude of change is negligible to low, because some months will differ from mean baseline values, but will remain within range of natural variation. On average, WSE of the lake fluctuates 0.8 m over a year, but the greatest change estimated to be caused by pumping 0.11 m from baseline conditions or 14% of the baseline range". Effects on littoral habitat in Tatelkuz Lake were not considered to have changed in the subsequent updated assessments (Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment, ERM September 2017). Conclusions presented in the Application/EIS are considered to be conservative, as water withdrawal from Tatelkuz Lake to augment flows in Davidson Creek will be decreased based on project design changes. Any potential changes in aquatic habitat will be monitored as part of the follow-up program for the CEAA Decision Statement Condition 3.16 pertaining to fish habitat in Tatelkuz Lake and Chedakuz Creek. A memo on this follow-up plan was submitted to Indigenous groups for review.	KP requested transfer to Palmer	CSFN	Palmer			TD	Ready for Submission	TD, Jun 27	Ready for Publishing
603	Chapter 9-E: Mine Water and Discharge Management Plan	Pumping of Tatelkuz Lake to Davidson Creek	CSFN	Palmer	Aug 08, 2022	2	New	Recommendation	No	The reviewer acknowledges the response to this comment and looks forward to reviewing the final 3.16 Follow Up Program. (Source Comment ID#170)	This comment is acknowledged and we also look forward to submitting the updated 3.16 follow up program.		CSFN	Palmer			TD	Ready for Submission	TD; Aug 16	Ready for Publishing
603	Chapter 9-E: Mine Water and Discharge Management Plan	Pumping of Tatelkuz Lake to Davidson Creek	CSFN (Martin Shin)	Palmer	Oct 11, 2022	3	New	Recommended Permit Condition	Yes	The reviewer has reviewed the updated 3.16 follow-up program (FUP). Section 6 of the FUP states: "In collaboration with the indigenous groups, further refine and plan Follow-up Programs 3.16.1, 3.16.2, and 3.16.3"." Please discuss the collaboration process and include a section describing the success and challenges with the collaborative development of this plan. This will be a helpful record for future CSFN representatives and BW Gold staff. (Source Comment ID#170)	BW Gold supports continuing collaboration with the Nations on the Federal Decision Statement (DS) Fisheries Follow-up Programs, and maintaining a record of the successes and challenges with the collaborative development of this plan by maintaining consultation meeting minutes on an information portal to maintain an open record of the engagement process. **However, it should be noted that compliance with the federal decision (DS) statement is governed by IAAC and consequently does not need to be addressed through the major works applciation with the province of BC.**		CSFN	Palmer			TD		TD, Oct 24	Ready for Publishing

604	Chapter 9-E: Mine Water and Discharge Management Plan	Trigger Action Response Plan	CSFN	Stephanie Eagen, R.P.Bio..; Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The Application must include a TARP to minimize water withdrawals from natural sources. The TARP should include levels to trigger stop pumping when flows are adequate in Davidson Creek. The TARP must also define clear targets and ranges of flows for success with creek flows. (Source Comment ID#171)	"Flows are monitored in the FWR to track release of water into Davidson Creek. The FWR flow monitoring systems are described in the Water Management Structures Detailed Design Report (Appendix 3-O). The FWR outlet pipes will feed into a Temperature and Flow Control Chamber, and each pipe will be fitted with a main valve and maintenance valve with the ability to regulate flows according to water surface levels and IFN requirements. Ultrasonic flow meters will be installed on the pipes upstream of the outlet valves to accurately measure flows for compliance reporting requirements. Surface water level monitoring will be used to quantify the total volume in the reservoir and also to indicate when the spillway is being used. In addition, a hydrometric monitoring station downstream of the FWR can be used as a backup to confirm the IFN release. These flow and level monitoring instrumentation are to be used in conjunction to determine if any supplemental water is required from the FWSS to meet IFN and by how much. The FWSS Report (Appendix 3-P) describes the pumping system from Tatelkuz Lake. The objective of this system is to only provide additional flow when the IFN cannot be met by diversions and mine water management. The maximum IFN is 0.56 m3/s during the spring; the FWSS will draw water from Tatelkuz Lake through two pipes (for redundancy), which will passively convey water from the lake to a concrete wet well. The intake screen design basis assumption includes a 0.67 m3/s capacity for each screen. Three vertical turbine pumps within the pump station will provide a total maximum flowrate of 0.67 m3/s . Each of the pumps will be equipped with a variable frequency drive and motor to accommodate variable flow demand. As described in Section 3.5.6.7 of the Application, the design of the FWSS takes into consideration the requirements to provide variable and controlled flow from Tatelkuz Lake." Following disucssions and outcomes of the permit review phase, BW Gold will be developing a site-wide water management plan as a stand-alone document. It will encompass the flow logic from each of the contact and non-contact water sources, mill water demands, open pit closure needs, flow needs in Davidson Creek from the various water sources, etc.... The intent is to bring together the flow information that exists across numerous technical documents that is usable by the mine operations team. This document will be prepared as part of the commissioning phase, similar to the logic to have other operating manuals prepared and ready prior to the start of Operations.		CSFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
604	Chapter 9-E: Mine Water and Discharge Management Plan	Trigger Action Response Plan	CSFN - P. Littlejohn,	Palmer	Aug 22, 2022	2	Follow Up	Recommendation	No	Please refer to comment #66 (ITT ID 499) from CSFN's first batch of Round 2 comments (memo titled 220808 Source Round 2 Detailed Comments on the Blackwater Major Works Application (Batch 2A)) for recommendations on meeting IFN in Davidson Creek and Chedakuz Creek. (Source Comment ID#171)	The Tatelkuz Lake Protection Plan referred to in ITT Comment #497 (Source comment #64) will define the framework for FWSS pumping from Tatelkuz Lake to minimize adverse effects on aquatic habitat in Chedakuz Creek and Davidson Creek during a variety of flow scenarios. The framework will include trigger levels to reduce or stop pumping from Tatelkuz Lake while meeting the Davidson Creek IFN and the proposed Chedakuz Creek EFN regimes.		CSFN	Palmer			TD	Ready for Submission	TD, Aug 25	Ready for Publishing
604	Chapter 9-E: Mine Water and Discharge Management Plan	Trigger Action Response Plan	CSFN - P. Littlejohn,	Palmer	Oct 11, 2022	3	Follow Up	Recommendation	Yes	Acknowledged. The reviewer recommends carrying BW Gold's comment forward as a permit condition. Please also refer to CSFN's Round 3 comments under ITT ID 497 for more details on recommended permit conditions for the Tatelkuz Lake Protection Plan.(Source Comment ID#171)	BW Gold supports inclusion of the Tatelkuz Lake Protection Plan (TLPP) defining the framework for FWSS pumping from Tatelkuz Lake to minimize adverse effects on aquatic habitat in Chedakuz Creek and Davidson Creek during a variety of flow scenarios. The framework will include trigger levels to reduce or stop pumping from Tatelkuz Lake while meeting the Davidson Creek IFN and the proposed Chedakuz Creek EFN regimes.		CSFN	Palmer			TD		TD, Oct 24	Ready for Publishing
605	Chapter 9-E: Mine Water and Discharge Management Plan	Trigger Response Plan	CSFN	Stephanie Eagen, R.P.Bio., Knight Piésold Ltd.	Jun 02, 2022	1	New	Information Requirement	No	The application must include a TRP that contains trigger values and action levels that would be linked to specific measures that could be implemented should particular conditions arise (e.g., if seepage from TSF is greater than predicted). A more detailed mitigation and contingency plan that accounts for risks related to uncertainties must be developed. (Source Comment ID#172)	Please see Section 10 of Appendix-9E, which discusses potential non-conformities and corrective actions associated with mine site discharges.		CSFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
606	Chapter 9-E: Mine Water and Discharge Management Plan	Closure Water Quality Exceedances	CSFN	Colin Fraser, P.Geo.; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Figure 7.1-5 of Appendix 9-E shows a conceptual water balance schematic for the site during Closure. During this phase, water treatment is not employed. This schematic indicates that all contact water is kept within the site boundary, while catchment runoff is directed to the WMP and then to the FWR and to the environment without treatment. Comparison of water quality modeling results for the pre-operation period to closure (i.e., Figure 4-10 and Figure 4-14 of Appendix 5-D) shows the dramatic change in water quality from baseline conditions to closure. This indicates that untreated or contact water is expected to report to Davidson Creek during Closure. Information Request: Please explain the source of untreated contact water that is making its way to the environment. (Source Comment ID#173)	The reviewer is directed to the plots and discussion under ENV - Comment 125. In short, the Closure period exceedances are linked to loads from an overburden seepage pathway that reports to the WMP during this Project phase. Discharges from WMP report to FWR and then eventually to Davidson Creek nodes. A loading plot for the WMP (see figure provided as part of Comment 125) is provided to illustrate the importance of this flow/load pathway in the Closure period.		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 21	Ready for Publishing
606	Chapter 9-E: Mine Water and Discharge Management Plan	Closure Water Quality Exceedances	CSFN - P. Littlejohn,	Colin Fraser, P.Geo.; Jennifer Stevenson, P.Geo.; Lorax Environmental Services Ltd.	Aug 22, 2022	2	Follow Up	Information Requirement	No	If this specific known source is causing exceedances during closure, then why not capture and treat this water (or otherwise prevent it from being released to the environment)? (Source Comment ID#173)	Since the responses to Round 1 comments 125 and 606 were drafted, an updated water balance/water quality model has been issued (please refer to Round 1 attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"). The Davidson Creek water quality guideline exceedances that were predicted to occur in the previous Application water balance/water quality model no longer occur in this updated model. Therefore, capture and treatment of the overburden seepage pathway referenced in Round 1 comment response 606 is not required to meet receiving environment objectives.		CSFN	Lorax	KP			Ready for Submission	GM; Aug 30	Ready for Publishing
607	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN	Knight Piésold Ltd. and Lorax Environmental Service Ltd.	Jun 02, 2022	1	New	Information Requirement	No	Figure 7.1-6 of Appendix 9-E shows conceptual water balance schematics for the site during Post-Closure. During this phase, water treatment is to be conducted primarily on ECD seepage, pit lake overflow, contact water from the upper waste stockpile, and a portion of the surplus water from the TSF. It is puzzling that only a portion of surplus water from the TSF is to be treated and discharged. Table 4-3 of Appendix 5-D shows that the predicted TSF seepage quality is expected to exceed acute water quality guidelines for total zinc and dissolved cadmium a majority of the time, with regular exceedances of acute guidelines for ammonia and silver. Long term guidelines are expected to be exceeded for many parameters on a near constant basis. Clearly this mine contact water presents a major risk to the receiving environment, but it is only partially treated. Typically, mine operators choose to either treat a source of contamination or not. It is this reviewer's opinion that the proposed membrane water treatment plant would address the contaminants of concern in the TSF spillway during post closure. Information Request: Please describe Artemis's thinking that led to proposing a project where only partial treatment of a highly impacted source of contact water is considered. (Source Comment ID#174)	Since the Application, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) are no longer predicted to exceed BC WQGs. The updated predictions also show improved water quality discharged in the Post-Closure phase from the TSF Spillway. While the project water management plan continues to include (untreated) discharge from the TSF Spillway, the updated water balance/water quality model shows that BC WQGs can be achieved in the receiving environment without treating this discharge. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing

607	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Aug 22, 2022	2	New	Information Requirement	No	See Round 2 response to comment #57 (ITT ID 490). (Source Comment ID#174)	This comment is acknowledged.		CSFN	Lorax	KP			Ready for Submission	GM; Aug 30	Ready for Publishing
607	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up		No	The comment remains open and is being carried forward. (Source Comment ID#174)	The workplan being developed for ID 411c and to be submitted on Nov 22 will address this comment.		CSFN	Lorax				26-Oct-22	GM; Oct 26	Ready for Publishing
607	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up		No	To be addressed through ITT ID 490	Please refer to the forthcoming response that will be provided for Round 4 Comment 490.		CSFN	Lorax						
608	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN	Cindy Starzyk, Ph.D., P.Eng., Knight Piésold Ltd.	Jun 02, 2022	1	New	Recommendation	No	Figure 7.1-6 of Appendix 9-E shows conceptual water balance schematics for the site during Post-Closure. During this phase, water treatment is to be conducted primarily on ECD seepage, pit lake overflow, contact water from the upper waste stockpile, and a portion of the surplus water from the TSF. It is puzzling that only a portion of surplus water from the TSF is to be treated and discharged. Table 4-3 of Appendix 5-D shows that the predicted TSF seepage quality is expected to exceed acute water quality guidelines for total zinc and dissolved cadmium a majority of the time, with regular exceedances of acute guidelines for ammonia and silver. Long term guidelines are expected to be exceeded for many parameters on a near constant basis. Clearly this mine contact water presents a major risk to the receiving environment, but it is only partially treated. Typically, mine operators choose to either treat a source of contamination or not. It is this reviewer's opinion that the proposed membrane water treatment plant would address the contaminants of concern in the TSF spillway during post closure. Recommendation: Assuming the TSF spillway is indeed the dominant source of contamination in Davidson Creek during Post-Closure, all of this source of water should be treated before release. (Source Comment ID#175)	Please refer to comment response #607.		CSFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
608	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Aug 22, 2022	2	New	Recommendation	No	Please see the Round 2 comment in comment #14 (ITT ID 490) (Source Comment ID#175)	This comment is acknowledged.		CSFN	Lorax	KP			Ready for Submission	GM; Aug 30	Ready for Publishing
608	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up		No	Please refer to the Round 3 comment under comment ID 490.(Source Comment ID#175)	Please refer to the response to Round 3 Comment #490 in this tracking table.		CSFN	Lorax					GM; Nov 1	Ready for Publishing
608	Chapter 9-E: Mine Water and Discharge Management Plan	Post-Closure Water Treatment	CSFN - F. Mohamm	Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up		No	To be addressed through ITT ID 490	Please refer to the forthcoming response that will be provided for Round 4 Comment 490.		CSFN	Lorax						
609	Chapter 9-E: Mine Water and Discharge Management Plan	Evaluation of Detection Limits	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	Table 7.3-2 provides the detection limits for measured parameters. The proposed detection limits for some parameters (e.g., cadmium and copper) are not 10 times below the WQG, which is standard practice. An evaluation of the proposed detection limits against WQGs should be completed. Baseline hardness should be used (e.g., median baseline hardness) for guidelines that are hardness-dependent. Recommendation: Please conduct a screening evaluation against WQGs to determine whether the proposed detection limits are adequate for the monitoring program. (Source Comment ID#176)	Please refer to attachment "R1_CSFN Comment ID 609.pdf"		CSFN	Lorax		Meghan /Sophie	GM	Ready for Submission	GM; June 29	Ready for Publishing

610	Chapter 9-E: Mine Water and Discharge Management Plan	Development of Permit Limits	CSFN	Lorax Environmental Service Ltd.	Jun 02, 2022	1	New	Recommendation	No	Table 8.2-1 provides proposed permit limits for the freshwater reservoir. Considering the projected exceedances of WQGs during closure for some parameters (e.g., cadmium). The list of permit limits should be developed using the full suite of COPCs identified in Chapter 6 over the life of mine to ensure that water is not released in closure that may result in exceedances of receiving environment WQGs. This is based on the understanding that any permit granted would remain in effect until an amendment is approved. Recommendation: Please revise the list of proposed permit limits in Table 8.2-1 to include all COPCs identified for Davidson Creek over the life of mine. (Source Comment ID#177)	BW Gold Ltd. has elected to apply for an EMA effluent discharge permit for the Construction and Operation phases based on discussions with ENV. Therefore, permit limits are proposed for those phases. Since the Application, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the project receiving environment are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 28	Ready for Publishing
611	Chapter 9-E: Mine Water and Discharge Management Plan	Permit Limits below Short-Term WQGs	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	Tables 8.2-3 and 8.2-4 provide proposed permit limits for the Camp Site and Plant Site Sediment Control Pond Discharge and for the downstream aggregate borrow area sediment control pond, respectively. The proposed permit limits for total arsenic, dissolved cadmium, dissolved copper, total manganese, and total zinc exceed the short-term BC WQG for the protection of aquatic life. Discharge limits should not reflect concentrations that have the potential to result in acute toxicity. No information is provided that would demonstrate that this effluent mixture would not result in acute toxicity if effluent concentrations achieved the upper-case predictions. Recommendation: Please propose permit limits that are below short-term WQGs and that can be demonstrated to not result in acute toxicity if realized in the effluent mixture. For example, short-term toxicity tests with the rainbow trout and Daphnia magna could be conducted in simulated effluents to support the application. (Source Comment ID#178)	Please refer to comment response #587.		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 28	Ready for Publishing
611	Chapter 9-E: Mine Water and Discharge Management Plan	Permit Limits below Short-Term WQGs	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Aug 11, 2022	2	Follow Up	Information Request	No	Please provide the time-frame in which refined predicted discharges will be available to inform permit limits. (Source Comment ID#178)	BW Gold will provide a response to comments related to the SCPs in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		CSFN	Lorax		Meghan		Ready for Submission	GM; Aug 16	Ready for Publishing
611	Chapter 9-E: Mine Water and Discharge Management Plan	Permit Limits below Short-Term WQGs	CSFN	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Oct 11, 2022	3	Follow Up	Recommended Permit Condition	Yes	Recommended Permit Condition: Please refer to the recommendations under comment #154 of this memo (ITT ID 587). (Source Comment ID#178)	Please refer to the response provided to Comment 587 in this tracking table.		CSFN	Lorax					GM; Oct 31	Ready for Publishing
611	Chapter 9-E: Mine Water and Discharge Management Plan	Permit Limits below Short-Term WQGs	CSFN (J. Sinclair)	Meghan Goertzen, R.P.Bio; Lorax Environmental Services Ltd.	Dec 12, 2022	4	Follow Up	Recommended Permit Condition	Yes	Please see the reviewer's response to ITT comment #587.	Please refer to the response provided for ITT comment #587.		CSFN	Lorax				Dec. 19	TD, Dec 19	Ready for Publishing
612	Chapter 9-E: Mine Water and Discharge Management Plan	Mitigations for Exceedances in Closure and Post-Closure	CSFN	Lorax Environmental Services Ltd.	Jun 02, 2022	1	New	Recommendation	No	No effluent limits are proposed for the TSF spillway in post-closure. The Application is incomplete without detailing appropriate mitigations for managing the predicted exceedances of WQGs and YD-WQSs during the closure and post-closure period. Recommendation: The draft Joint Mines Act / Environmental Management Act Permits Application should be revised to apply to all phases of mine life and detail appropriate mitigations for managing the predicted exceedances of WQGs and YD-WQSs during the closure and post-closure period. (Source Comment ID#179)	BW Gold Ltd. has elected to apply for an EMA effluent discharge permit for the Construction and Operation phases based on discussions with ENV. Therefore, permit limits are proposed for those phases. Since the Application, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the project receiving environment are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"		CSFN	Lorax		Meghan	GM	Ready for Submission	GM; June 28	Ready for Publishing

613	Chapter 9-J: Mine Emergency Response Plan	Commitments in MERP	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	The Mine Emergency Response Plan (MERP) outlines many commitments the company will undertake, prior to Construction, annually and ongoing. Please include a commitment checklist at the beginning of the document or as an appendix, that outlines the timing of these commitments when Indigenous involvement is required, and the forum for engagement. For example, the Dam Breach Inundation response plan and the Water Treatment Shutdown/Failure plan are to be developed prior to Construction and should be provided to CSFNs for comment and engagement. Such plans could be discussed at the EMC table. Additionally, an incident response plan that requires significant updates, due to adaptive management or annual review, may also require CSFNs' input at the EMC table. Developing such a commitment checklist and engagement plan to keep the MERP and associated documents updated, will assist BW Gold in maintaining a transparent and positive working relationship with its Indigenous partners. Furthermore, proactive communication and engagement will help BW Gold identify gaps and improve adaptive management. And finally, CSFNs will have the benefit of knowing emergency plans are up to date, follow established communication protocols, and are as comprehensive as they can be to protest CSFNs' rights. Recommendation: a)Develop a commitment checklist for the MERP as an appendix or at the beginning of the document. b)Include the commitment timing (prior to construction, annually, ongoing – as needed), when Indigenous engagement would occur, and the forum for engagement. (Source Comment ID#180)	The Mine Emergency Response Plan (MERP) outlines BW Gold's commitments and protocols in the event of an emergency or incident at the Blackwater mine site. The MERP needs to be a focused and concise document to provide an easy access to contact information in the event of an emergency. The information requested by the reviewer is more applicable to the Environmental Assessment Certificate Condition 36 (Accidents and Malfunctions Administration and Communication Plan) and the associated Condition 35 (Tailings Dam Safety Transparency Plan). The plans required by the EAC Condition 36 and 35 will provide BW Gold's commitments through the life of the mine, including what is required when, as well as the approach to Indigenous engagement.		CSFN	ERM		Jesse/Tonia	RT	Ready for Submission	RT; June 22	Ready for Publishing
614	Chapter 9-J: Mine Emergency Response Plan	Indigenous Contact Information	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	Table 7.6-1: Indigenous Contacts is missing information required, as per the Communication Protocol Summary in Table 7-1. Depending on the consequence level of an incident, a number of Indigenous representatives may need to be contacted ranging from EMC members to Chiefs of Nations. The EMC member contact information is missing. Additionally, the phone numbers listed for each Chief are the band office numbers only, which are not open after business hours. Incidents requiring immediate notification of Chiefs will require their personal cell phone numbers. Please confirm with each Chief an appropriate number to reach them, day or night, and who from BW Gold would brief them during the event of a level 4 or 5 incident. Also, please note, Chief Marten Louie is the newly elected Chief for the Nadleh Whut'en First Nation. Recommendation: a)Include individual EMC member contact information in Table 7.6-1 for each Indigenous Nation. b)Update the Chiefs' contact information with appropriate cell phone numbers, respectively. Inform Chiefs who would be their main point of contact during a Level 4 or 5 incident. c)Update Table 7.6-1 and Table A-1: Indigenous Contacts to include newly elected Nadleh Whut'en Chief Marten Louie: chunih@nadleh.ca. (Source Comment ID#181)	BW Gold will coordinate with each Indigenous Group to maintain the appropriate contact information in a central location. The EMC is an EAC condition construct and EMC members may not be the appropriate contacts for all Indigenous Groups in the contact of the MERP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		CSFN	ERM		Jesse	RT	Ready for Submission	RT; June 14	Ready for Publishing
614	Chapter 9-J: Mine Emergency Response Plan	Indigenous Contact Information	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Aug 11, 2022	2	Follow Up	Recommendation	No	Thank you for your response regarding updating management plans. With respect to EMC members, Table 7-1 of the AMCP already includes notification of Indigenous EMC representatives, therefore, please include their contact information in Table 7.6-1. Please update this table with newly elected Chief's contact information and that all Chiefs' phone numbers will be revised with personal cell phone numbers, pending their approval. (Source Comment ID#181)	Contact information for EMC representatives is included in Table 7.6-1. The contact information will be updated during plan updates as described in the previous response and BW Gold will coordinate with each Indigenous group to maintain the appropriate contact information (including cell phone numbers if permission is granted) in a central location.		CSFN	ERM		Valerie		Ready for Submission	RT; Aug. 14	Ready for Publishing
614	Chapter 9-J: Mine Emergency Response Plan	Indigenous Contact Information	CSFN (Georgina Farah)	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Oct 11, 2022	3	Follow Up		No	Thank you for your response. To clarify, Table A-1 in Appendix A and Table 7.6-1 of the AMCP will need to be updated, prior to Construction. Contact information for CSFN EMC representatives Kirsten Chapman (Nadleh Whut'en First Nation) and Kasandra Turbide (Saik'uz First Nation) and Doug Casimel/Deane Carlson (Stellat'en First Nation) is missing. Additionally, the new Nadleh Chief's contact information will need to be updated. Once these tables are updated, this comment can be considered closed. (Source Comment ID#181)(Source Comment ID#181)	A revised Table A-1 in Appendix A of the Mine Emergency Response Plan and Table D-1 in Appendix D of the Accidents and Malfunctions Administration and Communication Plan (formerly Table 7.6-1) will be provided to the Carrier Sekani First Nations the week of October 24th for review.		CSFN	ERM		Valerie		Ready for Submission	TD, Oct 19	Ready for Publishing
615	Chapter 9-J: Mine Emergency Response Plan	Indigenous Contact Information	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	Yes	Table 7.6-1: Indigenous Contacts is missing information required, as per the Communication Protocol Summary in Table 7-1. Depending on the consequence level of an incident, a number of Indigenous representatives may need to be contacted ranging from EMC members to Chiefs of Nations. The EMC member contact information is missing. Additionally, the phone numbers listed for each Chief are the band office numbers only, which are not open after business hours. Incidents requiring immediate notification of Chiefs will require their personal cell phone numbers. Please confirm with each Chief an appropriate number to reach them, day or night, and who from BW Gold would brief them during the event of a level 4 or 5 incident. Also, please note, Chief Marten Louie is the newly elected Chief for the Nadleh Whut'en First Nation. Recommended Permit Condition: BW Gold, in collaboration with its Indigenous partners, should update the Indigenous Contact list in Table 7.6-1 annually. (Source Comment ID#182)	BW Gold acknowledges the recommended condition and will coordinate with each Indigenous Group to maintain the appropriate contact information in a central location.		CSFN	ERM		Jesse	RT	Ready for Submission		Ready for Publishing
615	Chapter 9-J: Mine Emergency Response Plan	Indigenous Contact Information	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Aug 11, 2022	2	Follow Up	Recommendation	Yes	Please see response to comment 181. (Source Comment ID#182)	Contact information for EMC representatives is included in Table 7.6-1. The contact information will be updated during plan updates as described in the previous response and BW Gold will coordinate with each Indigenous group to maintain the appropriate contact information (including cell phone numbers if permission is granted) in a central location.		CSFN	ERM		Valerie		Ready for Submission	RT; Aug. 14	Ready for Publishing
615	Chapter 9-J: Mine Emergency Response Plan	Indigenous Contact Information	CSFN (Georgina Farah)	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Oct 11, 2022	3	Follow Up	Recommendation	Yes	Please see the Round 3 comment under comment #181 of this memo. (Source Comment ID#182)(Source Comment ID#182)	A revised Table A-1 in Appendix A of the Mine Emergency Response Plan and Table D-1 in Appendix D of the Accidents and Malfunctions Administration and Communication Plan (formerly Table 7.6-1) will be provided to the Carrier Sekani First Nations the week of October 24th for review.		CSFN	ERM		Valerie		Ready for Submission	19-Oct-22	Ready for Publishing

616	Chapter 9-L: Fuel Management and Spill Control Management Plan	External Communication	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Information Requirement	No	In the event of a spill, Table 9.1-1 identifies when Indigenous Groups would be notified, according to the spill classification level. All communication to CSFNs that relate to any kind of spill incident should align with the communication protocol outlined in the Accidents and Malfunctions Plan. For example, in the Fuel plan, Table 5.2-1 External Contact Information includes Indigenous band office phone numbers. Calling the band office about a fuel spill would not be following the communication protocol. While the Fuel plan is distinct from the Mine Emergency Response Plan, CSFNs expect that fuel spills reporting will not have a different method of notification. All fuel spills should be reported according to the Accidents and Malfunction Plan's Communication Protocol Summary in Table 7.1 (appendix to the MERP). This table captures fuel spill classifications and the respective actions required. These actions should be integrated into the Fuel Spill plan Table 9.1-1: Fuel Spill Severity Classifications. Additionally, the Indigenous contact information should be included in Fuel spill plan. Finally, any amount of a fuel spill that impacts or may impact a Yinka Dene Class I, II or III water body is to be considered a Level 3 consequence at a minimum, and notification should be accordingly. Recommendation: a)Include Tables 7.1 and 7.6-1 from the Accidents and Malfunction Plan to identify how CSFNs should be communicated with, in the event of a level 2 or 3 fuel spill. b)Include updated Indigenous contact information, similar to the Accidents and Malfunction Plan. c)Spills to Yinka Dene water bodies are to be considered a Level 3 consequence at a minimum, and notification should be accordingly. (Source Comment ID#183)	(a) BW Gold acknowledges the recommendation to incorporate Tables 7.1 and 7.6-1 from the Accidents and Malfunction Plan into the Fuel Management and Spill Control Management Plan. Reference to the Accidents and Malfunction Plan will be included in a future iteration of the Fuel Management and Spill Control Management Plan. (b) BW Gold acknowledges the recommendation to incorporate Indigenous contact information into the Fuel Management and Spill Control Management Plan. Reference to the Accidents and Malfunction Plan and updated contact list will be included in a future iteration of the Fuel Management and Spill Control Management Plan. (c) The Level 2 and Level 3 spill severity will be clarified in a future iteration of the plan to indicate that a Level 2 spill may enter a body of water that does not leave the site boundaries, while a Level 3 spill may enter a body of water that may leave the site boundary (which could include a Yinka Dene water body). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		CSFN	ERM		Jesse/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
616	Chapter 9-L: Fuel Management and Spill Control Management Plan	External Communication	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Aug 11, 2022	2	Follow Up	Information Requirement	No	The reviewer looks forward to seeing the updates included in future iterations of the Fuel Management and Spill Control Plan. (Source Comment ID#183)	BW Gold commits to updating the plans/procedures as outlined in Round 1 responses.		CSFN	ERM		Jesse/Tonia		Ready for Submission	RT; Aug. 14	Ready for Publishing
617	Chapter 9-L: Fuel Management and Spill Control Management Plan	Corrective Active Plan	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Information Requirement	No	In section 11.1, BW Gold identifies that fuel transport companies should be aware of various spill scenarios that could result in potential impacts on waterbodies and habitat. Information Request: What steps will BW Gold take to ensure that fuel contractors are aware of the fuel spill requirements, particularly off-site, and/or en-route to site, including reporting duties to Indigenous Nations? (Source Comment ID#184)	BW Gold will require emergency response plans from fuel trucking contractors and request that it includes reporting requirements to Indigenous nations when off-site or en-route. BW Gold will retain responsibility for reporting on-site spills to Indigenous Nations.		CSFN	ERM		Rolf	RT	Ready for Submission	RT: June 26	Ready for Publishing
618	Chapter 9-M: Chemicals and Materials Storage Plan	Transport and Management of Sulphur Dioxide	CSFN	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 02, 2022	1	New	Recommendation	No	Section 6.5.1 of the updated CMSP refers to the whole document itself (Appendix 9-M) for procedures for transport to site and onsite management of Sulphur dioxide reagent. Recommendation: Simply refer to Section 8. (Source Comment ID#185)	BW Gold acknowledges the recommendations for the next update to the Chemicals and Materials Storage Plan (CMSP). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		CSFN	ERM		Jesse	RT	Ready for Submission	RT; June 14	Ready for Publishing
619	Appendix 9-G	Invasive Plant Management Plan Section 3.1 (9)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: how will 2013 baseline invasive plant data be updated to ensure most accurate data is being used to inform strategies?	The following text has been added to Section 9: "Baseline information related to invasive plants will be updated based on monitoring results. Any changes to invasive plant species will be reflected in annual updates to the IPMP." The following text is in Section 10 (Reporting and Record Keeping): "The EM is responsible for data management, reporting and records related to invasive plants. The EM will report key results of invasive plant monitoring to the Blackwater Environment Committee and Aboriginal Groups during routine meetings. Monitoring data will be entered into an electronic database and have quality control checks completed upon receipt of results. Data will be entered into a standard format that allows for data reporting and analyses. Data and data comparisons will be stored in a single file format for each type of survey or monitoring activity. Monitoring data will be stored for the life of the mine and will be made available for review upon request. Changes to invasive plant species will be recorded and reported annually in the Blackwater Project Annual Reclamation Report."	7/TD to revie	LDN/UFN	ERM		Tonia	RT	N/A		
619	Appendix 9-G	Invasive Plant Management Plan Section 3.1 (9)	LDN_UFN		Jun 06, 2022	1	New	-	No	Invasive species change over time. 2013 is a very old baseline data. Has this been updated at all?	BW Gold acknowledges the comment and will be completing vegetation surveys in 2022 (including invasive plant surveys). Collected invasive plant data will be used to inform future iterations of the IPMP.	7/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
620	Appendix 9-G	Invasive Plant Management Plan Section 3.1 (8)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: what is known about invasive plant species along the other access roads (e.g., Kluskus-Ootsa FSR)? This is a major vector for species to spread onto the mine site if not managed appropriately. How has this been considered in the MP?	The IPMP scope focuses on the mine site. BW Gold will be responsible for invasive species management on BW Gold-controlled roads.	No	LDN/UFN	ERM		Tonia	RT	N/A		
620	Appendix 9-G	Invasive Plant Management Plan Section 3.1 (8)	LDN_UFN		Jun 06, 2022	1	New	-	No	BW comment has been acknowledged. However invasive species do not know boundaries, therefore BW Gold controlled roads must be considered within the IPMP. How will these major vectrs of spread be managed appropriately?	BW Gold continues to commit to invasive species management on BW Gold controlled roads. BW Gold understands that the holder of each road permit (e.g., Kluskus-Ootsa FSR) will hold the responsibility for managing invasive plants. In addition, the site security will perform a visual inspection for cleanliness (Section 8.1) on all earth moving equipment and vehicles upon arrival to the mine site. Mine equipment and vehicles will be restricted to Project roads, trails, and pullouts through a combination of training, mapping and signage.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
621	Appendix 9-G	Invasive Plant Management Plan 3.1 (Appendix A)	LDN_UFN		Jun 06, 2022	0	-	-	No	(Tables 3-1 and 3-2) Add: table for provincial priority species. This list is updated more frequently and should be used in addition to regional targets.	Appendix A of the IPMP provides the following priority species information and lists: - Table 1-1 describes the provincial priority invasive plant definitions and management objectives; - Table 1-2 lists the provincial priority invasive plant species from the BC Inter-Ministry Invasive Species Working Group (BC IMISWG); - Table 2-1 describes the invasive plant priority ranking descriptions for the Cariboo Chilcotin region; and - Table 2-2 lists the priority invasive plant species for the CCCIPC sub-regions.	No	LDN/UFN	ERM		Tonia	RT	N/A		

621	Appendix 9-G	Invasive Plant Management Plan 3.1 (Appendix A)	LDN_UFN		Jun 06, 2022	1	New	-	No	Comment is largely resolved. However it needs to be made clear exactly when information was gathered for tables A-2 and A-4 (month and year where possible)	The source for Tables A-2 (BC Inter-Ministry Invasive Species Working Group, 2021) and Table A-4 (CCCIPC 2020) are indicated in the Notes for each table in Appendix A of the Invasive Plant Management Plan (IPMP) . The Appendix A References indicate that the information was gathered from the sources for the tables in August 2021. The timing of IPMP updates will be informed by monitoring results and changes to provincial and regional (CCCIPC) priority invasive species lists and new management recommendations (see Section 12 of the IPMP); at which time the information in the Tables A-2 and A-4 may be updated.	T/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
622	Appendix 9-G	Invasive Plant Management Plan Section 5 (8)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: personnel routinely clean clothing and boots when travelling from areas on site where invasive plan infestations are known to occur… where do they do this? How is spread from the cleaning area prevented? How is this mitigation measure monitored? How can its effectiveness be tracked?	Following text added to Section 8.1: "Any employees coming from offsite will have clean equipment, boots, and clothes. Employees are expected to arrive fit for duty with clean equipment and apparel. Employees will clean their boots with a boot brush provided as part of health and safety."	No	LDN/UFN	ERM		Tonia	RT	N/A		
622	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New	-	No	"Any employees coming from offsite will have clean equipment, boots, and clothes. Employees are expected to arrive fit for duty with clean equipment and apparel. Employees will clean their boots with a boot brush provided as part of health and safety." This has not been added to the IPMP. Response to the "additional" text: Where will they be cleaning their equipment? On site? Offsite? In a designated area? Will this area be monitored for invasive species establishment? What will happen if invasives start to grow in the designated area (if there is one)? Who will monitor staff to ensure this is happening?	The following text will be added to Section 8.1 of the Invasive Plant Management Plan: "Any employees/contractors coming from offsite will be expected to arrive fit for duty with clean equipment, boots, and clothes. Boot brushes will be available at offices/site entrances for employees to clean off their boots prior to entry. These areas will be monitored for invasive plants as part of the overall monitoring program." The expectation for clean boots/equipment will be set in site training and will be reinforced through opportunistic checks and reminders by EMs. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
622	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Partially resolved when additional text has been added to the edited plan. However, within the additional text, it is not clear what will happen if invasive species are found where employees will be cleaning their equipment. Suggest adding, 'if invasive species are observed during routine monitoring of the designated cleaning stations (i.e., site entrances), appropriate follow up treatment will take	Section 8.1 of the Invasive Plant Management Plan will be revised to include the suggested text:" Any employees/contractors coming from offsite will be expected to arrive fit for duty with clean equipment, boots, and clothes. Boot brushes will be available at offices/site entrances for employees to clean off their boots prior to entry. These areas will be monitored for invasive plants as part of the routine monitoring		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
623	Appendix 9-G	Invasive Plant Management Plan Section 5 (8)	LDN_UFN		Jun 06, 2022	0	-	-	No	Add: "cleaning earth moving equipment" … to make sure it is free of soil and vegetation.	Section 8.1 includes the following: "Earth moving equipment and trucks are expected to be clean and free of soil and vegetation when they arrive on the mine site. Upon arrival on the mine site, EM or designate inspects earth moving equipment and trucks. Upon arrival at the mine site, EM or designate inspects earth moving equipment and trucks and direct cleaning if required. Cleaning will be in designated areas using high pressure power washers. Water will be contained to remove seeds and propagules to prevent dispersion of invasive species on the mine site."	No	LDN/UFN	ERM		Tonia	RT	N/A		
623	Appendix 9-G	Invasive Plant Management Plan Section 8.1 and 8.2	LDN_UFN		Jun 06, 2022	1	New	-	No	"Upon arrival at the mine site, EM or designate inspects earth moving equipment and trucks and direct cleaning if required. Cleaning will be in designated areas using high pressure power washers. Water will be contained to remove seeds and propagules to prevent dispersion of invasive species on the mine site." This language is not included in the plan.	The following text will be added to Section 8.1 of the Invasive Plant Management Plan: "Trucks and equipment are expected to be clean upon arrival at site. The EM or designate will inspect earth moving equipment and trucks when they arrive at site and direct cleaning if required. Cleaning will be in designated areas using high pressure power washers or similar means to achieve the same objective. Water will be contained and/or filtered to remove seeds and propagules to prevent dispersion of invasive species on the mine site." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
623	Appendix 9-G	Invasive Plant Management Plan Section 8.1 and 8.2	LDN_UFN		Jul 22, 2022	2	Follow Up	Clarification	No	How will "Water will be contained and/or filtered to remove seeds and propagules to prevent dispersion of invasive species on the mine site."?	The methods to contain water and/or filter to remove seeds and propugules will likely be the use of a catchment/filtration area and potentially use of filter cloth. Wash water will be directed towards a sump which will be periodically cleaned out, with the waste being placed in a location that would prevent seeds from germinating (e.g., deep burial, placement in the TSF or other means). The method will be determined when designated cleaning areas are assigned by the Environmental Manager to meet the requirements of the Invasive Plant Management Plan.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
623	Appendix 9-G	Invasive Plant Management Plan Section 8.1 and 8.2	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up	Clarification	No	A more definitive answer is required to resolve this comment. Please explain, and include within the IPMP, precisely how water will be contained and filtered to remove seeds and propagules after clearning earth moving equipment and trucks with a power washer	The text provided in response to the Round 2 comment (i.e., the use of a catchment/filtration area and potentially use of a filter cloth) will be provided in the next iteration of the Invasive Plant Management Plan (IPMP). However as stated in the response to the Round 2 comment, the definitive method will be determined when designated cleaning areas are assigned by the Environmental Manager to meet the requirements of the Invasive Plant Management Plan. Upon designation of the cleaning area(s), the definitive method(s) to contain wash water and filter seeds will be provided in the revised IPMP.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 13	Ready for Publishing
624	Appendix 9-G	Invasive Plant Management Plan Section 5 (8.1)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: Re "cleaning earth moving equipment" Where will this take place? Will there be a designated on-site cleaning area/wash station? Which methods will be used for what type of vehicles/machinery? How will this be documented?	See response to ID #70. {Stockpiling and storage has been added to Section 8.1 as follows: "Minimize soil erosion and degradation through adherence to the SEPSCP. If straw bales are used for erosion control, only certified weed-free straw will be used. In accordance with the RCP and SMP, salvage topsoil during construction and operations. Topsoil will not be stockpiled or stored in areas containing invasive plant species. Stabilize exposed soils and promptly re-seed with native seeds mix and monitor confirm effective vegetation recolonization." }	No	LDN/UFN	ERM		Tonia	RT	N/A		
624	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New	-	No	Text is missing in the plan from comment #71 (not #70) response. [ID#622] Further, how will this be documented has not been addressed. Please clarify.	The text indicated in response to the Round 0 comment ID#624 is provided in bulleted list in Section 8.1 of the Invasive Plant Management Plan.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
625	Appendix 9-G	Invasive Plant Management Plan 5 (8)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: monitoring to ensure treatment objectives are being met - do you mean recording efficacy? Where are treatment objectives defined?	Treatment objectives has been revised as "Management objectives" in Section 8.2.1 as follows: "When invasive plants are identified on site, the CCCIPC or an appropriate authority will be consulted to determine optimal approach for management. For each species, a management objective will be established to guide the approach to treatment activities. Management objectives may include the following: - Eradication: completely remove all individuals of invasive plant species. This objective is typically applied to species that occur in limited distributions. - Containment: limit the extent of an infestation and prevent spread to un-infested areas or areas of high value, such as undisturbed or revegetated areas. This objective is typically applied when infestations are established but not widespread.	No	LDN/UFN	ERM		Tonia	RT	N/A		

625	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2	LDN_UFN		Jun 06, 2022	1	New	-	No	The following text from the response is not included in the management plan. Please add: "When invasive plants are identified on site, the CCCIPC or an appropriate authority will be consulted to determine optimal approach for management. For each species, a management objective will be established to guide the approach to treatment activities. Management objectives may include the following:" Who is the appropriate authority? In the current IPMP it states that CCCIPC, Aboriginal Groups and ENV will be consulted.	The following text will be added to Section 8.2.1 of the Invasive Plant Management Plan: "When invasive plants are identified on site, the CCCIPC or an appropriate authority will be consulted to determine optimal approach for management. For each species a treatment plan and management objective will be established, which may include:" BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
625	Appendix 9-G	Invasive Plant Management section 8.2.2	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Clarification	No	The following question has not been answered in BW Gold's response "Who is the appropriate authority? In the current IPMP it states that CCCIPC, Aboriginal Groups and ENV will be consulted. "	While the CCCIPC is the authority on invasive plant management for the region that the Blackwater mine site is in (Nazko sub-region of Cariboo Regional District Electoral Area 1) there are other agencies that can be consulted for invasive species management. The appropriate authority may include but are not limited to the Province and Indigenous groups (e.g., Inter-Ministry Invasive Species Working Group) and dependent on the invasive species. The statement in the Invasive Plant Management Plan will be edited to indicate that the CCCIPC is the primary authority to consult, others such as the Inter-Ministry Invasive Species Working Group or Indigenous groups or ENV may be consulted and dependent on the invasive species. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate,		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
626	Appendix 9-G	Invasive Plant Management Plan Section 5 (6)	LDN_UFN		Jun 06, 2022	0	-	-	No	Add: updating IP list and providing updated maps for the mine site to employees annually	Section 6 indicates updated invasive plant lists and maps available to mine site personnel.	No	LDN/UFN	ERM		Tonia	RT	N/A		
626	Appendix 9-G	Invasive Plant Management Section 6	LDN_UFN		Jun 06, 2022	1	New	-	No	There is no indication of how often updated plant lists and maps will be provided to mine personnel. Please clarify.	As identified in Section 6 of the Invasive Plant Management Plan, BW Gold will review and update the training and awareness documentation based on changes in training needs and regulatory requirements annually. This will include updates to plant lists and maps as required and will be clarified in the revised plan following completion of the Application review.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
626	Appendix 9-G	Invasive Plant Management Section 6	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Comment	No	Please add to the IPMP "This will include updates to plant lists and maps as required" from BW Gold response	The statement 'This will include updates to plant lists and maps as required' will be added to Section 6 of the Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
627	Appendix 9-G	Invasive Plant Management Plan Section 6 (8.2.2)	LDN_UFN		Jun 06, 2022	0	-	-	No	Add: Please include more detail on invasive plant disposal. Where will they be taken and how will this be documented?	Section 8.2.2 Mechanical Control indicates: "Disposal methods may vary by species and could include burning, deep burial in a landfill, or bagging. In remote areas, the CCCIPC recommends bagging flowers/seeds for disposal and leaving uprooted plant parts to dry out and decay (CCCIPC 2021)".	No	LDN/UFN	ERM		Tonia	RT	N/A		
627	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New	-	No	Provide a reference to "disposal methods may vary by species". This is incorrect. All invasive plant material should be removed from site. If treatment has happened, how will this be documented?	Acceptable disposal methods (depending species/life stage) also include burning and deep burial, both of which could be available on site. See Dispose with Care Invasive Plant Disposal in BC (Factsheet December 2021; https://bcinvasives.ca/wp-content/uploads/2022/03/Dispose-with-Care-FS-1221_20211210.pdf).	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing

628	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New	-	No	Add details of where approved biological control agents can be found, and who regulates the release of biocontrol agents (i.e.., provincial website). Who will be releasing agents if they will be used. Add info such as "as of May 2022 species X, Y, Z do/do not have agents that may be used for control"	The following text will be added to Section 8.2.2.1 of the Invasive Plant Management Plan: " A complete list of species that do/do not have agents that may be used for control is maintained by the Government of BC (https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/management/plants/biological-control/biological-control-agents-host-plants). This list (as is periodically updated) will be reviewed if biological control is considered and a contractor will be engaged to release and monitor biological control agents as required." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
628	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
628	Appendix 9-G	Invasive Plant Management Plan 6.2 (8.2.2)	LDN_UFN		Jun 06, 2022	0	-	-	Yes	Add: commitment to only use biological control that is proven effective (approved for use) and appropriate for the area	The following has been added to Section 8.2.2 Biological Control 8.2.3.2: "Only biological control that is proven effective, approved for use, and appropriate for the area and target species will be used."	No	LDN/UFN	ERM		Tonia	RT	N/A		
629	Appendix 9-G	Invasive Plant Management Plan 6.4 (8.2.2)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: where will pesticides be stored and disposed of? Please reference sections of the appropriate MP. Who will be qualified to use the pesticides? Washing station and disposal of waste?	Refer to Appendix E Pesticide Use and Application. It identifies requirements in the Integrated Pest Management Regulation related to herbicide use and handling.	No	LDN/UFN	ERM		Tonia	RT	N/A		
629	Appendix 9-G	Invasive Plant Management Plan 8.2.2. & appendix E	LDN_UFN		Jun 06, 2022	1	New	-	No	Information in Appendix F is applicable, however it does not address what BW Gold will be doing. i.e.., where will BW Gold store herbicides? If a contractor is being hired, this must be stated in the IPMP. Who (specifically) will be conducting treatments? i.e.., who in BW Gold? Or which contractor/company?	A contractor will be engaged for herbicide application (the company is yet to be determined). If BW Gold decides to do herbicide treatments itself in future, the requested information will be provided in an updated Invasive Plant Management Plan.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
629	Appendix 9-G	Invasive Plant Management Plan 8.2.2. & appendix E	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up		No	The information provided in the response must be included in the updated management plan. i.e., it must state that BW Gold will hire a contractor to complete herbicide treatments for invasive plant management on site.	The following statement will be added to Section 8.2.2.1 of the Invasive Plant Management Plan (IPMP): 'If herbicide treatments are recommended for invasive plant species management, a contractor will be hired by BW Gold to implement the herbicide application. The contractor administering the treatment will have BC Pest Control Service Licence, and each supervising applicator must have a valid BC Pesticide Applicator Certificate in the Industrial Vegetation and Noxious Weed Category.' Additional requirements for herbicide treatments will be provided in Section 8.2.2.1 of the IPMP in accordance with the LDN Herbicide Use Policy		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
630	Appendix 9-G	Invasive Plant Management Plan 6.4 (n/a)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: is targeted grazing a viable option? Not likely at the mine site. Has this been considered for the transmission line?	The scope of the IPMP is the mine site. This comment will be considered in the invasive plant management plan to be developed for the transmission line.	No	LDN/UFN	ERM		Tonia	RT	N/A		
630	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN		Jun 06, 2022	1	Follow Up	Information requirement	No	Suggest adding a section referring to control measures. It should be noted that cultural control through targeted grazing has been considered but is not an option at the mine because of X, Y, Z... e.g., accessibility, site of infestations, species observed etc... Expand more on this.	The current extent of known invasive plant occurrences on or near the mine site do not warrant consideration of cultural control, and can be managed using the control methods presented in the Invasive Plant Management Plan (IPMP). For this reason, BW Gold does not plan to include a discussion on cultural grazing in the IPMP.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
630	Appendix 9-G	Invasive Plant Management Plan	LDN_UFN (Danny Smart)		Jul 22, 2022	2	New	-	No	"The scope of the IPMP is the mine site. This comment will be considered in the invasive plant management plan to be developed for the transmission line." Is another IPMP being provided for review as per BW Gold response?	A Transmission Line Integrated Vegetation Management Plan has been drafted (May 2022) for review and includes the objective 'prevent and manage invasive plants'. The scope of the joint application excludes the transmission line - the Transmission Line Integrated Vegetation Management Plan will be provided for review as part of the transmission line permitting process.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
630	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Information Requirement	No	LDN and UFN are strongly opposed to herbicide application within their territory. Please explain how BW Gold will address this and again justify why cultural control is not warranted. Request a memo addressing this.	A memo will not be provided in response to the comment. BW Gold received the LDN Herbicide Policy in August 2022 and will revise the Invasive Plant Management Plan (IPMP) in accordance with the policy. BW Gold reiterates that the current extent of known invasive plant occurrences on or near the mine site do not warrant consideration of cultural control, and will provide in the required invasive plant treatment plan a clear justification of why other management methods are not being used (per the LDN Herbicide Policy, August 2022). BW Gold anticipates future updates to the IPMP in consideration of updates to current policies or other Indigenous nations policies received (see Section 12 of the IPMP). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM	BWG	Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
630	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		Yes	The LDN herbicide policy is for LDN only and does not address UFN's opposition to herbicide. KES and UFN are meeting August 26th to discuss herbicide use and anticipates providing a response to Artemis on their stance shortly after this. However, if UFN remain opposed to herbicide use, how will BW Gold address this? BW Gold must provide a justification for why cultural control does not warrant consideration, especially as UFN are currently opposed to herbcide use. Cultural control also include applying fertilizer or mulch and is not limited to just goat grazing, therefore why is this not considered? Are BW Gold committing to mechanical treatment only in this case?	BW Gold acknowledges the comment and can update the Invasive Plant Management Plan (IPMP) upon receipt of the UFN's herbicide policy. As stated Section 8.2.2 of the IPMP BW Gold will consult Indigenous nations (along with Cariboo Chilcotin Coast Invasive Plant Committee, and BC Ministry of Environment and Climate Change Strategy) to determine the best strategy for treatment. Therefore in the case that herbicide is prohibited in the territory at which the invasive plant species is identified, an alternative treatment will be developed in consultation with Indigenous nations.		LDN/UFN	ERM	BWG	Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
630	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN (Danny Smart)		Oct 06, 2022	4	Follow Up		No	UFN do not approve of the use of herbicide. Discussions are ongoing with UFN regarding the use of herbicide in their Territory, and there is no current herbicide policy. BW Gold will be kept updated on these discussions. Because UFN are opposed to herbicide, it is expected that BW Gold will committ to ongoing discussions regarding the use of herbicide for invasive plant treatment. The best strategy for treatment may inclide fertilizer application, seeding, mulching, or solarization which are cultural control methods. Please provide a justification for why these methods are not considered and/or	BW Gold acknowledges that UFN will keep BW Gold updated on discussions regarding the use of herbicide in their Territory. BW Gold commits to ongoing discussions regarding the use of herbicide for invasive plant treatment. Table 8.2.2 - Mechanical Control Methods for Invasive Plants includes revegetation and seeding along with hand pulling/digging, collecting and bagging and hand mowing and mowing.		LDN/UFN	BWG	BWG	Travis		18-Oct-22	TD, Oct 17	Ready for Publishing

630	Appendix 9-G	Invasive Plant Management Plan 8.2.2.1	LDN_UFN (Danny Smart)		Nov 17, 2022	5	Follow Up		No	UFN remain opposed to the use of herbicide in their Territory. Because some of the invasive plants identified in the 2011 baseline data do not respond well to manual treatment (e.g., handpulling orange hawkweed or common tansy), as referenced in the IPMP, the best strategy for treatment that is not herbicide use may include fertilizer application, seeding, mulching, or solarization. Please include this information to your treatment options for invasive plant management. OR, is Artemis committing to using mechanical methods (e.g., mowing, clipping at ground level, weed whacker etc) to all identified invasive plants regardless of the size of the infestation? Please further explain treatment methods that will be used that are not herbicide application.	Please refer to attachment "R5_LDN UFN_Comment ID 630.pdf"		LDN/UFN	BWG					TD, Nov 24	Ready for Publishing
631	Appendix 9-G	Invasive Plant Management Plan 6.4 (Table 8.2.3)	LDN_UFN		Jun 06, 2022	0	-	-	No	Add: Please note measures to prevent stray drift or runoff into PFZs during treatment (e.g., buffer strip?). Will there be a variety of setback distances based on the herbicide(s) being applied and weather?	Table 8.2.3 provides buffers for NTZ and PTZ buffers based on guidance from BC Hydro's Integrated Vegetation Management Plan (BC Hydro 2016).	No	LDN/UFN	ERM		Tonia	RT	N/A		
631	Appendix 9-G	Invasive Plant Management Plan Table 8.2.3	LDN_UFN		Jun 06, 2022	1	New	-	No	Table 8.2.3 provides guidance for NTZ and PFZs, however it does not address challenges with chemical treatment such as spray drift, run off, herbicide carryover, damage to non-target species, operator error. NTZ and PFZ should be clearly defined, how each is measured (e.g., section 73(1(2)) for PFZ) and demonstrate the difference. Also include why these are important (i.e.., examples listed above), and how they will be implemented.	Mitigation measures to address challenges chemical treatment are presented in Section 8.2.2 and Appendix F of the Invasive Plant Management Plan (IPMP), and include the following commitments: Herbicides will not be used under the following conditions: when it is raining; when ground winds are over 8km/h; when site conditions prevent the use of herbicides (e.g., coarse textured soils); and when the benefit of using a herbicide is negligible. Any herbicide application will be targeted rather than broad spraying to reduce the amount of herbicide used and to minimize adverse effects to the surrounding environment. Definitions of PFZ and NTZ will be provided in the next iteration of the IPMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate,	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
631	Appendix 9-G	Invasive Plant Management Plan Table 8.2.3	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Information requirement	No	BW Gold must acknowledge that additional errors and environmental damage can occur from incorrect chemical treatment of invasive plants. E.g., operator error (including incorrect application rates, improper calibration of equipment, inconsistent speed or pressure of spray) that may impact non-target species. In addition, soil type, weather, adverse growing conditions, herbicide carryover (residual elements that can affect native and/or newly planted species), herbicide drift after high winds or rain. Why has this information not been included in detail within the IPMP? Please include PFZ and NTZ definitions BW Gold will be using within app review so that we can ensure correct definitions and acknowledgment of the areas has been reviewed.	As stated in Section 8.2.2.1 'Herbicide application must comply with BC's Integrated Pest Management Act and be documented using the BC MFLNRO Invasive Plant Chemical & Mechanical Treatment Record (BC MOFR 2010b)'. The measures provided in the Invasive Plant Management Plan are general procedures and (as identified in response to comment #629) a contractor with a valid BC Pest Control Service Licence will be hired. Prior to conducting work, the contractor will provide a treatment plan for BW Gold approval specific to the herbicide and invasive species for the purpose of section 7 (1) (a) of the IPMR and as described in 58(1) (2) (3) and (4) of the IPMR. The treatment plan will also be in accordance with the LDN Herbicide Policy received August 2022 (see response to Comment #630). The treatment plan is expected to provide the additional errors and environmental damage that can occur from incorrect chemical treatment of invasives species identified by the reviewer. As defined by the *Integrated Pest Management Regulation* :		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
631	Appendix 9-G	Invasive Plant Management Plan Table 8.2.3	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	BW Gold response has been acknowledged. Please add to the IPMP that once a contractor has been chosen to complete invasive plant treatment, the contractor will provide a treatment plan for BW Gold approval (which includes approval from LDN Chief and Council) which will address errors and envirnmental damage that may occur during treatment (examples provided in previious comments). Please confirm that the PFZ and NTZ definitions will be included in the updated IPMP	BW Gold will update the Invasive Plant Management Plan (IPMP) to indicate that a contractor will provide a treatment plan for BW Gold approval (and includes LDN review) that will address errors and environmental damage that may occur during treatment. The definitions for PFZ and NTZ will be included in the updated IPMP. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
632	Appendix 9-G	Invasive Plant Management Plan 7.1 (9)	LDN_UFN		Jun 06, 2022	0	-	-	No	Clarify: Will invasive plant observations be mapped or delineated in the field with signage or flagging?	During visual surveys, a photograph and GPS location will be recorded for each invasive plant observation and retained in database.	No	LDN/UFN	ERM		Tonia	RT	N/A		
632	Appendix 9-G	Invasive Plant Management Plan (9)	LDN_UFN		Jun 06, 2022	1	New	-	No	Retained in what database? Will information be shared or inputted to the provincial database? If not, why?	All incidental observations will be retained in an onsite database and provided to IAPP via an IAPP report (see Appendix G of the Invasive Plant Management Plan; IPMP) and, as outlined the Section 10.2 (Record Keeping) of the IPMP, all monitoring data will be entered into a suitable electronic database.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
632	Appendix 9-G	Invasive Plant Management Plan (9)	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Clarification	No	Clarify within the plan what 'suitable electronic database' will be used. Section 10.2 (Record Keeping) does not currently commit to entering information into IAPP. Is BW Gold committing to this? Plan will need updating.	A commitment to 'entering incidental observations in an onsite database and provided to IAPP via an IAPP report (provided in Appendix G of the Invasive Plant Management Plan [IPMP])' will be provided in Section 10.2 of the IPMP. A suitable electronic database will be one that allows for all relevant information to be entered and subsequently ported to analytical programs such as Microsoft Excel or R project to all for comparison between years and be stored in a single file format for each type of monitoring activity or survey. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
633	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN		Jun 06, 2022	0	-	-	No	(Table 7.2-1) Add: consideration for monitoring beyond known locations to confirm/refute spread	Table 9-1: Invasive Plant Monitoring Program has been revised to include the following: "Areas proximate to known locations of invasive plant species will also be monitored to confirm/refute spread"	No	LDN/UFN	ERM		Tonia	RT	N/A		
633	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN		Jun 06, 2022	1	New	-	No	"Areas proximate to known locations of invasive plant species will also be monitored to confirm/refute spread" has not been added to the IPMP. Proximate should be further defined. Will monitoring/surveys occur within 500m? 1 km? 2km? to known locations to confirm infestations have not spread. How will infestations be compared between each year to ensure they have not increased?	Table 9-1 of the Invasive Plant Monitoring Program will be revised as follows: "Monitor areas proximate to known sites. Monitoring will occur within 500 m extent around the known sites to confirm/refute spread." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT; June 19	Ready for Publishing

633	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN		Jul 28, 2022	2	Follow Up	-	No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
634	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN		Jun 06, 2022	1	New	-	No	How will this be recorded?	As stated in Section 9 of the Invasive Plant Management Plan, if invasive plants are observed, surveyors will: record the GPS location; take photographs; and, if needed to confirm the invasive plant species, collect a sample (bag and label). If invasive species or noxious weeds are observed, the Environmental Monitor will report to the EM, who will designate a qualified professional to select the appropriate treatment method, oversee the treatment, conduct follow-up monitoring to document treatment efficacy and document and report the activities, findings and recommendations to the EM. The EM will consult Indigenous Groups, ENV and CCCIPC on the treatment method. If herbicide treatment is required, it will be applied before the flowering stage (early spring) when plants are most susceptible (BC MOFR 2010b)."	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
634	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Clarification	No	BW Gold response has been acknowledged. However, the question of 'how will this be recorded' is referring to monitoring efforts for treatment efficacy, not observations of invasive species. i.e., how will monitoring of treatment be recorded, and will this information be available and provided in a report (which includes pictures of treatments)?	Section 10.1.2 of the Invasive Plant Management Plan will be revised to include additional detail regarding what will be reported in the Annual Reclamation Report (ARR).: 'The ARR will provide a summary of monitoring results and describe mitigation measures, including treatments applied and the next year's monitoring program. If treatment is applied, details of how, where, when, treatments were applied in addition to follow-up monitoring completed or to be completed to assess the efficacy of the treatment'. If herbicide treatment is applied, BW Gold will provide the follow-up report provided by the contractor in accordance with BC's Integrated Pest Management Act . BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
634	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	BW Gold response has been acknowledged. Please clarify/ensure that in addition to what has been mentioned for the ARR report, the chemical used, treatment method (backpack/boom sprayer) and quanitity on herbicide will also be included in the report	BW Gold commits to including in the Annual Reclamation Report summary of monitoring results and mitigation measures: the chemical used, treatment method (backpack/boom sprayer) and quanitity on herbicide. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	TD, Sept 14	Ready for Publish
634	Appendix 9-G	Invasive Plant Management (Table 9-1)	LDN_UFN		Jun 06, 2022	0	-	-	No	(Table 7.2-1, Treatment Locations) Add: bi-weekly observations between treatments to observe efficacy of treatment (see commitment in 7.2)	Table 9-1: Invasive Plant Monitoring Program has been revised to include the following: "Bi-weekly observations between treatments to assess efficacy of selected treatment."	No	LDN/UFN	ERM		Tonia	RT	N/A		
635	Appendix 9-G	Invasive Plant Management Plan 7.3 (9)	LDN_UFN		Jun 06, 2022	0	-	-	No	Add: Please include field data form template in an appendix. What kind of database and who will perform the review? The review serves what purpose? Field technicians participating in the survey will be trained in what and by who? Please note if a QP specializing in invasive plant management will be involved.	A field data form will be prepared prior to the commencement of construction. Section 6 Training and Awareness indicates the training will be done by BW Gold Environment Dept. Section 9 indicates that monitoring will be performed by an appropriately qualified Environmental Monitor, under the direction of the BW Gold EM.Section 9 has been revised to include the following: Qualified professionals would be consulted on changes to the monitoring program and mitigation measures, and decisions on treatment methods. Section 10.2 describes record keeping and data management.	T/TD to revie	LDN/UFN	ERM		Tonia	RT	N/A		
635	Appendix 9-G	Invasive Plant Management6 & 9	LDN_UFN		Jun 06, 2022	1	New	-	No	Section 6 only highlights that "employees and contractors will receive training in vegetation management", and does not include who will performing the training. Please add. "Qualified professionals would be consulted on changes to the monitoring program and mitigation measures, and decisions on treatment methods." is not included in section 9 as per the response. Please add.	Section 6 of the Invasive Plant Management Plan (IPMP) states: "Employees and contractors will receive training in vegetation management on their arrival on site and prior to the start of work as part of the Site Orientation." The trainer will be responsible for delivering the site orientation. No change will be made to this sentence. The final paragraph in Section 9 (Monitoring) of the IPMP addresses the requirement for a qualified professional to oversee monitoring, mitigation, and treatment methods. No additional text is required in Section 6.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
636	Appendix 9-G	Invasive Plant Management Plan N/A (8.2.2)	LDN_UFN		Jun 06, 2022	0	-	-	No	Add: Plan appears to be missing PMP requirements outlined in Section 58 of the Integrated Pest Mangement Regs. Please refer to 58 (2)(d), (3) and adjust as appropriate.	A reference to Section 58 of the Regulation and brief discussion of pest management plans has been added in Section 8.2.2. Injury levels and treatment thresholds are also discussed.	No	LDN/UFN	ERM		Tonia	RT	N/A		
636	Appendix 9-G	Invasive Plant Management Plan8.2.2	LDN_UFN		Jun 06, 2022	1	New	-	No	It should be noted in the IPMP that treatments will align with the *Invasive Alien Plants Pest Management Plan for Provincial Crown Lands in Central and Northern British Columbia*	The following text will be added to Section 8.2.2 of the Invasive Plant Management Plan: "Treatments will align with the Invasive Alien Plants Pest Management Plan for Provincial Crown Lands in Central and Northern British Columbia." (above sub-heading Injury Levels and Treatment Thresholds.) BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
636	Appendix 9-G	Invasive Plant Management Plan8.2.2	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing

637	Appendix 9-G	Invasive Plant Management Plan Section 2.0	LDN_UFN		Jun 06, 2022	1	New		No	Edit: "avoid the introduction and spread of invasive plants through early detection" suggest changing to "limit the introduction"	The following text will be revised in Section 2.0 of the Invasive Plant Management Plan to state "limit the introduction and spread of invasive plants through early detection". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
637	Appendix 9-G	Invasive Plant Management Plan Section 2.0	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
638	Appendix 9-G	Invasive Plant Management Plan Section 2.0	LDN_UFN		Jun 06, 2022	1	New		No	Map 7.1 highlights the access road and invasive plant infestations to the mine site. These roads will be a vector of spread for invasive species and may bring species identified to the mine site. Please be clear and address why the access roads have not been included within the management plan.	There are no known invasive plant locations on the Mine Access Road (Figure 7-1). See Response to Comment #620 for management activities that will be implement to reduce the spread of invasive species to the Project site.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
638	Appendix 9-G	Invasive Plant Management Plan Section Table 9-1	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Clarification	No	BW Gold response has been acknowledge. It is important to note that currently the access road does not have any known invasive species. However, overtime, it is likely that species can/will be introduced. Comment #620 and Table 9-1 does not clearly suggest that the length of the mine access road will be surveyed/monitored/treated for invasive species if they become present. Table 9-1 only suggests the junction of the mine access road and kluskus-ootsa FSR will be monitored. Please clarify and confirm that the length of the road is incorporated into monitoring.	BW Gold continues to commit to invasive species management on BW Gold controlled roads. Invasive species management includes survey/monitoring and treatment. The junction is a priority monitoring area because it is the transition area from the Klukus-ootsa FSR (i.e.., not BW Gold-controlled) to the mine access road (i.e.., BW Gold-controlled) and an area for early detection before plants encroach up the mine access road. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
638	Appendix 9-G	Invasive Plant Management Plan Section Table 9-1	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	Please clarify in the updated plan that the junciton is a priority monitoring area because it is a transition area from the Klusklus-Ootsa FSR to the mine access road and an area for early detection before plants encroach up the mine access road, and that the mine access road will also be monitored. Table 9.1 does not clearly state that the length of teh mine access road will be monitored as well.	BW Gold will provide clarity within the Invasive Plant Management Plan regarding the priority monitoring at the transition area Klukus-Ootsa FSR (i.e.., not BW Gold-controlled) to the mine access road (i.e.., BW Gold-controlled) and an area for early detection before plants encroach up the mine access road. Table 9.1 will be updated to indicate the length of the mine access road will be monitored for invasive plants. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; sept 15	Ready for Publishing
639	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jun 06, 2022	1	New		No	Add information why they can displace native vegetation. E.g., because of rapid growth rate, prolific seed producers, easily dispersed, largely disease and insect resistant, form large dense monocultures, reduce soil productivity etc…	The following text will be added to Section 2.1 of the Invasive Plant Management Plan: "Invasive plant species can outcompete native vegetation through rapid growth, prolific seed production and distribution, disease and insect resistance, the formation of dense monocultures and reduced soil productivity." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
639	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
640	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jun 06, 2022	1	New		No	"The blackwate mine site is in the Nazk sub-region of CRD Electoral Area 1" Add a figure/map showing this.	The intent of determining the sub-region in the Invasive Plant Management Plan (IPMP) was to establish priority invasive species in the CCCIPC Regional Strategic Plan. Therefore, inclusion of a map of the sub-region would be of negligible benefit to the users of this plan. For this reason, BW Gold will not update the IPMP to include a map showing the Nazk sub-region of CRD Electoral Area 1.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
641	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jun 06, 2022	1	New		No	The "2020 RSP Executive Summary for the Cariboo Chilcotin" should also be referenced here.	The 2020 RSP Executive Summary for the Cariboo Chilcotin will be added to Section 2.1 (available here: https://cccipc.ca/documents/2020_Invasive_Plant_Summary-compressed.pdf) in the next plan iteration. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RTI June 19	Ready for Publishing
641	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
642	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jun 06, 2022	1	New		No	The link on page 3 does not work. Which list are you referring to? The iner-ministry working group priority list? What about the BC Invasive Plants Candidate for Eradication list? Why is this not included as a reference material? https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/edrr_candidate_invasive_plants.pdf	The link will be updated in Section 2.1 to: https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/publications/provincial_priority_is_list.pdf. The recommended additional resource will be added (https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/edrr_candidate_invasive_plants.pdf). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
642	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing

643	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jun 06, 2022	1	New		No	Although there are currently no EDRR species observed within the project area , what is BW Gold protocol if an EDRR species is detected throughout any phase of the project?	The recommended reference (https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/edrr_candidate_invasive_plants.pdf) will be added, which will become the guidance document in the event that an EDRR species is found on site. In addition, instructions will be added to: "Flag off the area as a no disturbance area and contact the EM who will engage a QP to discuss appropriate eradication methods." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
643	Appendix 9-G	Invasive Plant Management Plan Section 2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
644	Appendix 9-G	Invasive Plant Management Plan Section 4.4	LDN_UFN		Jun 06, 2022	1	New		No	What is the purpose of listing guidelines and BMPs. Has BW Gold used and referenced each material listed? Will they be used during training? Will they be available to employees.	Best Management Practices (BMPs) are listed as source documents in most cases, but also as reference documents for additional guidance/recommendations. The BMPs will not be provided to employees, but the Environmental Manager and environmental monitors will be responsible for understanding the guidance provided in each BMP and its applicability to site conditions.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
645	Appendix 9-G	Invasive Plant Management Plan Section 4.4	LDN_UFN		Jun 06, 2022	1	New		No	IAPP and reference guide are listed twice	The following text will be revised in Section 4.4 of the Invasive Plant Management Plan: the duplicated IAPP and reference guide will be removed. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission		Ready for Publishing
645	Appendix 9-G	Invasive Plant Management Plan Section 4.4	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
646	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN		Jun 06, 2022	1	New		No	Who completed the baseline surveys? When? Where is the data stored?	Baseline studies were completed by AMEC in 2011 to 2013. Results are provided in Appendix 5.1.3.3A Vegetation 2011 – 2013 Baseline Report of the Blackwater Gold Project Application for an Environmental Assessment Certificate / Environmental Impact Statement Assessment of Potential Environmental Effects (New Gold 2015). Baseline data will be stored in an onsite database along with the results of the surveys completed beginning in 2022. Occurrences of Invasive Plants will also be reported to the IAPP using the IAPP Site & Invasive Plant Survey Record form (see Appendix G of the Invasive Plant Management Plan).	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
646	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN (Danny Smart)		Jul 22, 2022	2	Follow Up	Comment	No	Please add reference to the baseline data document (be specific for invasive plant sections because this document is very large). Although Kluskus FSR is not maintained by BW Gold, baseline data highlights that Field scabious and common tansy have been observed on the FSR. These are high priority species in the Nazko region and should be acknowledged within the IPMP (i.e., within the baseline data section) due to the possibility of it spreading to the mine site access road	A reference to baseline studies completed by AMEC in 2011 to 2013 (Appendix 5.1.3.3A Vegetation 2011 – 2013 Baseline Report of the Blackwater Gold Project Application for an Environmental Assessment Certificate / Environmental Impact Statement Assessment of Potential Environmental Effects (New Gold 2015)) and a reference to he 2022 baseline data will be included in the Invasive Plant Management Plan Section 7. Similar to the previous baselines, the updated 2022 baseline will include invasive plant records/observations from the surrounding area. Specific attention will be made to include the field scabious and common tansy on the Kluskus FSR. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 2	Ready for Publishing
646	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	We need to be confident that Artemis will address the uncertainty of new species, or larger infestations being identified within the new 2022 baseline data. For example, if a significant Field Scabious infestation has been found, how will Artemis deal with this?	The Invasive Plant Management Plan will be implemented if baseline data indicate infestation of invasives within the Certified Project Description (e.g., BW Gold owned mine access road). It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Sept 14	Ready for Publishing
646	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN (Danny Smart)		Oct 06, 2022	4	Follow Up		No	Because we have not seen the 2022 baseline data, within section 7 (baseline data) please include acknowledgement that Field scabious and common tansy have previously been observed along the Klusklus FSR and that these species are a high priority in the Nazko region. During staff training these species should be provided as examples of species of concern to watch for.	As stated in response to the Round 2 review comment, Section 7 of the Invasive Plant Management Plan will summarize all baseline data and include invasive plant records/observations from the surrounding area (including the observations of field scabious and common tansy along the Kluskus FSR). As stated in Section 6 (Training and Awareness) of the IPMP 'Invasive plant lists and species profiles (Appendices B, C, and E), and maps of known occurrences at or near the mine site will be made available to personnel.' Appendix E (CCCIPC Invasive Plant Species Profile) provides the a description and picture of the plants field scabious and common tansy.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Oct 19	Ready for Publishing

647	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN		Jun 06, 2022	1	New		No	What reference material was used to determine "biocontol agent is the primary means of control" for orange hawkweed? This is incorrect. Various herbicides are effective for the control of orange hawkweed.	The statement in the Invasive Plant Management Plan is incorrect and, as identified in Appendix C, there a number of mechanical, chemical and cultural options for control of orange hawkweed (CCCIPC 2017. Regional Strategic Plan for Invasive Plant Management). This will be edited in the next iteration of the Invasive Plant Management Plan to reflect the CCCIPC guidance (Section 7). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
647	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
648	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN		Jun 06, 2022	1	New		No	Explain why no treatment of yellow salsify or orange hawkweed have occurred within the mine site. This should occur before roads are heavily used and or material is moved on site where infestations have been found.	No treatment was completed because the invasive plants identified (yellow salsify and orange hawkweed) were not encountered in areas planned for disturbance by BW Gold. The need for treatment will be identified for areas planned for disturbance as determined by a qualified professional (see Table 9-1 of the Invasive Plant Management Plan). See also response to Comment #620 for mitigations to be completed by BW Gold to prevent the introduction of invasive plants from access roads not controlled by BW Gold.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
648	Appendix 9-G	Invasive Plant Management Plan Section 7	LDN_UFN		Jul 22, 2022	2	Follow Up	Information requirement	No	Please provide rationale within the IPMP. As this is a living document, demonstrating when and why treatment has taken place is important for transparency of efforts	The when and why of treatment methods are documented is in Section 8.2.2 of the Invasive Plant Management Plan (IPMP) that will be revised to indicate (see response to Comment #625) who will be consulted in terms of authority on the invasive species and how an optimal approach to treatment will be determined. Section 10.1.2 of the IPMP will be revised (see response to Comment #634) to indicate that the Annual Reclamation Report will provide the documentation of the treatment including how, where, when,		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 2	Ready for Publishing
649	Appendix 9-G	Invasive Plant Management Plan Section 8	LDN_UFN		Jun 06, 2022	1	New		No	"invasive plants may be introduced and spread throughout the life of the Blackwater mine". How? Why? Add explanation of identified vectors of spread within the IPMP (i.e.., access roads, easy seed dispersal, attach to vehicles etc...). Include what species have the potential to be transported to the mine site i.e.., some species identified in figure 7-1.	The primary methods of inadvertent introduction are provided in the following text and can be expanded further to detail how and why (in Section 8 of the Invasive Plant Management Plan): Invasive plants may be introduced and spread throughout the life of the Blackwater mine. The Project's construction activities will generate the largest initial ground disturbances and create suitable conditions for both the introduction and establishment of invasive plants. Vehicles and machinery are common transport and dispersal mechanisms for invasive plants. Additionally, invasive plants can be found in seed mixes used for reclamation purposes, although this risk is low with certified 100% weed-free seed mixes. The following text will also be included in Invasive Plant Management Plan: "See Figure 7-1 for the location and type of invasive plants located near site. These plants have the highest likelihood of being inadvertently spread on site because of their existing proximity to site." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission		Ready for Publishing
649	Appendix 9-G	Invasive Plant Management Plan Section 8	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
650	Appendix 9-G	Invasive Plant Management Plan Section 8	LDN_UFN		Jun 06, 2022	1	New		No	"SOP will be finalized" Is appendix D (SOP) a draft only? Will this be edited post plan review? The IPMP refers to this SOP several times and should be finalized during app review and included in the IPMP.	The Standard Operating Procedures provided in the Invasive Plant Management Plan (IPMP) are considered draft. They will be revised to incorporate comments during the Application review and provided in the revised IPMP to be prepared following application review.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission		Ready for Publishing
650	Appendix 9-G	Invasive Plant Management Plan Section 8	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
651	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	Where will inspections by site security take place? What will happen if soil and debris is found?	Site security will perform visual inspections of vehicles and earth moving vehicles at the gate house prior to entry to site. If debris (e.g., visible dirt and plant material) is observed on vehicles they will either be turned back for cleaning or cleaned on site at the closest sediment control pond with wash water directed into a nearby sump or pit and pumped into the pond. The driver will be directed to perform a final inspection to check that no clods of dirt are visible and radiators, grills and the vehicle interior are free of mud or plant material.	/TD to revie	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
651	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Clarification	No	BW Gold response has been acknowledged. Details must be included in the revised IPMP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 2	Ready for Publishing
652	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	Clarify "minimize clearing dimensions during construction". Suggest adding "to limit ground disturbance, specifically in areas with known invasive plant infestations"	The following text will be added to Section 8.1: "Minimize clearing dimensions during construction to limit ground disturbance, specifically in areas with, or nearby, known plan infestations." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
652	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing

653	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	Add where the Invasive Plant Monitoring SOP can be found	As stated in Section 9 of the Invasive Plant Management Plan, the Invasive Plant Monitoring SOP is provided in Appendix H of the plan.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
653	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Correct. However, the SOP is first mentioned in section 8. Please add the correct reference where the appendix in this section.	The correct reference will be included in the updated Invasive Plant Management Plan (IPMP). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
654	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	invested should be "infested"	Inappropriate occurrences of "invested" in the Invasive Plant Management Plan (IPMP) will be removed using 'find/replace' upon finalizing the IPMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
654	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
655	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	What is the protocol for inspecting clothes and vehicles when working in, prior to leaving, and in areas known to have infestations. What will happen if equipment/clothing has excessive debris?	The following text will be added to Section 8.1 of the Invasive Plant Management Plan: "If debris is noted on clothing brush off within infested area before leaving." Section (8.2.1) provides protocols for vehicles and earth moving equipment after working in areas with known infestations (i.e.., all vehicles and earth moving equipment will be cleaned using portable higher pressure washers within a portable containment structure at the infested site). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
655	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Add to new sentence "If debris (including plant material, seeds, or clods of dirt) is noted on clothing and/or footwear after working within an infested area, brush off within infested area before leaving. Employees and contractors will ensure to clean clothing away from natural watercourses and vegetation to minimize the spread of invasive species"	This suggested addition may not be universally applied. For example it would not be applicable if the infested area is along a stream bank (e.g., Japanese knotweed and policeman's helmet). Restricting the removal of debris to the already infested area (within the area that has the invasive plants that the debris originated from) will minimize the risk of causing further spread beyond what would naturally occur.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
655	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	BW gold response is unclear. BW Gold has previously agreed to adding "if debris is noted on clothing, brush off within infested area before leaving". We are asking to further explain the sentence with the suggestion of adding a definition of debris to the sentence, i.e., including plant material, seeds, or clods of dirt, and to note that cleaning will occur away from natural watercourses and native vegetation to minimize the spread of invasive species. It is unclear why japanese knotweed and policeman's helmet are being mentioned in this response.	We can amend the added sentence to include a definition of what debris will include, the updated text in Section 8.1 of the IPMP will read: "If debris (plant material, seeds, infested soil) is noted on clothing brush off within infested area before leaving." The example of policeman's helmet and Japanese knotweed were provided because these are examples of invasive species found primarily along waterways (and therefore would create a contradiction in the request to clear off debris within the infested area while being setback from a waterway). It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
655	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN (Danny Smart)		Oct 06, 2022	4	Follow Up		No	BW Golds response is acknowledged. Please ensure to also include "cleaning will occur away from natural watercourses and native vegetation to minimize the spread of invasive species" as part of the added sentence.	The revision to address Round 1 comment ID#655 will also include the statement "Cleaning of debris from clothing will occur away from natural watercourses and native vegetation to minimize the spread of invasive species".		LDN/UFN	ERM		Valerie/Tonia		18-Oct-22	TD, Oct 17	Ready for Publishing
656	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	Please explain/clarify what is meant by "depending on the risk of invasive species spread and establishment" as part of invasive plant monitoring post revegetation	The control of invasive plants (spread and establishment) during reclamation activities will follow the assessment and management criteria outlined in Section 8 of the Invasive Plant Management Plan.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
657	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jun 06, 2022	1	New		No	Section 9 of the RCP does not discuss monitoring. Please adjust to reference the correct sections	This reference error will be corrected in the updated Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
657	Appendix 9-G	Invasive Plant Management Plan Section 8.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing

658	Appendix 9-G	Invasive Plant Management Plan Section 8.21	LDN_UFN		Jun 06, 2022	1	New		No	"cleaning will be done in an area where contamination and seed spread is unlikely" suggest changing to limited. Because some seeds are small and easily move by the wind, the term unlikely implies seeds cannot move.	Section 8.2.1 of the Invasive Plant Management Plan will be revised as follows: "cleaning will be done in an area where contamination and seed spread is limited". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
658	Appendix 9-G	Invasive Plant Management Plan Section 8.21	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
659	Appendix 9-G	Invasive Plant Management Plan Section 8.21	LDN_UFN		Jun 06, 2022	1	New		No	Clarify "truck wash water will be collected and de-contaminated at a central location". Is BW Gold committing to collecting water used to clean vehicles/equipment and dispose of it? If so, how will this be done?	Section 8.21 of the Invasive Plant Management Plan will be revised to indicate that vehicles will be washed 30 m away from watercourses and areas of vegetation, wash water be collected (and not disposed). All vehicles and equipment that require washing at site (to remove potential invasive plant species) will be cleaned in designated area(s) with debris collected/bagged and incinerated or otherwise disposed of in a manner that does not promote dispersal of viable seeds. Vehicles will be cleaned with a high pressure hose in combination with a stiff brush and/or pry bar as needed to further assist the removal of dirt clods. Wash water will be directed to a nearby sump or pit away from vegetation or natural waterways. BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Ben	RT	Ready for Submission		Ready for Publishing
659	Appendix 9-G	Invasive Plant Management Plan Section 8.21	LDN_UFN		Jul 22, 2022	2	Follow Up	Information requirement	No	BW Gold comment has been accepted and acknowledged. However, it does not address how water will be collected. Please advise.	As stated in response to the Round 1 review comment, wash water (filtered of debris) will be directed to a nearby sump or pit away from vegetation or natural waterways. See response to 623 for additional information.		LDN/UFN	ERM		Ben		Ready for Submission	RT; Aug. 2	Ready for Publishing
659	Appendix 9-G	Invasive Plant Management Plan Section 8.21	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	"Vehicles will be cleaned with a high pressure hose in combination with a stiff brush and/or pry bar as needed to further assist the removal of dirt clods. Wash water will be directed to a nearby sump or pit away from vegetation or natural waterways." Please include this sentence within the IPMP. BW Gold has not clearly state how wash water will be collected. See comment 623 for our response - no further information has been provided by BW Gold.	The folowing statement will be provided in the revised Invasive Plant Management Plan (as indicated in the Round 1 response): "Vehicles will be cleaned with a high pressure hose in combination with a stiff brush and/or pry bar as needed to further assist the removal of dirt clods. Wash water will be directed to a nearby sump or pit away from vegetation or natural waterways." As indicated in the Round 2 and 3 response to comment ID#623, the methods to contain water and/or filter to remove seeds and propugules will likely be the use of a catchment/filtration area and potentially use of filter cloth. Wash water will be directed towards a sump which will be periodically cleaned out, with the waste being placed in a location that would prevent seeds from germinating (e.g., deep burial, placement in the TSF or other means). The specific method(s) will be determined when designated cleaning areas are assigned by the Environmental Manager to meet the requirements of the IPMP. The IPMP will be updated to provide the detailed methods for management of vehicle wash water. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 13	Ready for Publishing
660	Appendix 9-G	Invasive Plant Management Plan Section General	LDN_UFN		Jun 06, 2022	1	New		No	In the objectives of the IPMP BW Gold highlights " promptly detect and eradicate invasive plants through effective inventory, control, and monitoring program". However in section 8.2.2. of the IPMP addresses the criterial to be considered to determine the appropriate treatment and states " the potential to eradicate the species from the site". The objectives and treatment and control measures do not align. Is BW Gold committing to eradicate species or not.	The objective (i.e., to detect and eradicate invasive plants) is the desired goal of the Invasive Plant Management Plan. However, this is not always achievable, and the ability/requirement to eradicate a particular invasive plant will be dependent on the outlined criteria in Section 8.	T/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
660	Appendix 9-G	Invasive Plant Management Plan Section General	LDN_UFN		Jul 22, 2022	2	Follow Up		No	KES agrees that it is not always possible to eradicate a species, rather move to long term management. Please update the objectives of the IPMP because as it currently is written, it suggests that the objectives are to eradicate all species	While the objective is to eradicate it is acknowledged in Section 8.2.2 that there are different management objectives that may be realized through treatment and control. The term 'eradicate' will be replaced with 'managed' in Sections 2 and 5 to highlight this management strategy. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
661	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2	LDN_UFN		Jun 06, 2022	1	New		No	The difference between containment and control is unclear. Please clarify that containment is to prevent further expansion through the use of containment lines, and control (perhaps management is better suited) is related to a more established species but are a concern in high value areas.	Appendix A (Table A-1) clearly defines containment and containment/control. The table will be moved into Section 8.2.2 of the Invasive Plant Management Plan to replace the existing text in the next iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
661	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
662	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2	LDN_UFN		Jun 06, 2022	1	New		No	For the criteria of treatment it will be useful to reference the management objective because so far all state they are a high priority. E.g., EDRR species would be to eradicate	The following text will be added to the first bullet under criteria in Section 8.2.2 in the next iteration of the Invasive Plant Management Plan: "The status of the species- EDRR, high priority, and regulated noxious weeds receive higher priority for treatment (Appendix A), with the intent to eradicate." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
662	Appendix 9-G	Invasive Plant Management Plan Section	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing

663	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2	LDN_UFN		Jun 06, 2022	1	New		No	Invasive Pest Management Regulation does not exist. Do you mean Integrated Pest Management?	The correct term, "Integrated Pest Management", will be indicated in Section 8.2.2 of the Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
663	Appendix 9-G	Invasive Plant Management Plan Section	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
664	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Cultural control is also another method used to treat some invasive species. E.g., goats can be used to graze on spotted knapweed.	Please see response to Comment ID# 630.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
665	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Appendix is referenced but does not align with its reference. Adjust.	This Appendix reference error will be corrected in the Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission		Ready for Publishing
665	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
666	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	"Mechanical control includes collecting and bagging, hand cutting or mowing, hand pulling or digging, and revegetation and seeding" Awkward sentence. Suggest rewording as it currently implies bagging will only happen when plants are collected. BMP is for all plant material to be removed from the site. Will BW Gold use mechanical control measures?	BW Gold will utilize mechanical control. This sentence in the Invasive Plant Management Plan will be updated as follows in the next iteration of the IPMP: "Mechanical controls include removal via hand pulling/hand cutting/digging (all bagged and removed from site), mowing, and revegetation". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
666	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
667	Appendix 9-G	Invasive Plant Management Plan Table 8.2-1	LDN_UFN		Jun 06, 2022	1	New		No	re-vegetating and seeding efficiency section - add "does not control plants, rather has the potential to reduce their spread and density" Some invasives have an alleopathic trait which may inhibit germination of seed. Early germination of invasives may also not allow other species to become established. Revegetation must be used in conjunction with another treatment option.	The following text to be added to Table 8.2-2 of the Invasive Plant Management Plan will be revised as follows regarding efficiency of re-vegetation and seeding: "does not control plants, rather it has the potential to reduce spread and density". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
667	Appendix 9-G	Invasive Plant Management Plan Table 8.2-1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
668	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Biological control. Add who regulates the approval of bioagent release and if BW Gold intends on using biocontrol for invasive species on site. i.e.., do the species observed/recorded have an approved agent and density for their release?	BW Gold currently does not plan to implement biological control for any of the known invasive plant species that are currently found on or near the mine site. If, in the future, observed species are best controlled via biological controls, BW Gold will engage the Cariboo Chilcotin Coast Invasive Plant Committee and Invasive Species Council of BC for their recommended treatment program and required approvals.	T/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
668	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	response is acknowledged. Please add information to the plan.	BW Gold acknowledges that the information expected to be within the next iteration of the Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
669	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Where can StFN and NWFN herbicide use policies be found?	BW Gold has been made aware that these policies exist, and has requested them from the Nations, but has not receive copies to date.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
669	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure these are included in the IPMP because they are noted within the plan	BW Gold acknowledges that the policies are expected to be within the next iteration of the Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing

669	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Sep 01, 2022	3	Follow Up		No	See response to comment 691 regarding Stfn and NWFN policies.	BW Gold acknowledges the response and will provide a response to Round 3 comment ID#691.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
670	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Define raining further. If rain is forecasted with X number of hours etc... Light showers also prevents chemical treatment.	The Invasive Plant Management Plan will be updated to indicate that any rain can influence chemical treatment, and herbicide use will not be completed if it is raining or if rain is forecasted for the day of application. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
670	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management							Ready for Submission	GM; Aug 15	Ready for Publishing
671	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Must include, at minimum reference to, sections 71(8), 71(9a&b), 71(10a-c) of the regulations regarding chemical treatment and application	Appendix F details applicable clauses from the Integrated Pest Management Regulation (as referenced in Section 8.2.2.1 of the Invasive Plant Management Plan (IPMP)). Rows/text will be added to the table in Appendix F of the IPMP to include clauses 71(8), 71(9a&b), 71(10a-c). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
671	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
672	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Add "Herbicide action will be targeted through the use of a backpack sprayer or wick rather than broad spraying"	The following text will be added to Section 8.2.2.1 to the Invasive Plant Management Plan: "Herbicide action will be targeted through the use of a backpack sprayer or wick or similar mode of application." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
672	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jul 22, 2022	2	Follow Up	Question	No	What do you mean "or similar mode of application" as per BW Gold response to previous comment	The statement 'or similar mode of application' allows flexibility to include a hand sprayer or other targeted spray method of a similar size/application type as the backpack sprayer. The term 'targeted' limits the mode of application as requested by the reviewer.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
672	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	"similar mode of application" is too open for interpretation within this plan for chemical treatment, especially as LDN and UFN are opposed to chemical treatment. Therefore. please be more explicit with chemical treatment methods you intend to use, i.e., include all chemical treatment methods you wish to use within this plan	As stated in Section 8.2.2.2 of the Invasive Plant Management Plan (IPMP): "Herbicide selection will be informed by consultation with Indigenous nations and CCCIPC as well as site conditions, target species and treatment objectives." Thus the chemical treatment method will be determined based on the invasive species, risk to native communities, sensitivie ecosystems, and extent of the infestation. Therefore not all chemical treatment methods have been detailed in the IPMP. Instead BW Gold has provided in the draft IPMP and/or in response to comments on the draft IPMP how methods will be selected (i.e., to meet Indigenous nation herbicide use policies) and guidance documents that will be used to develop workplans for chemical treatment of invasive plant species (e.g., herbicide application must comply with BC *Integrated Pest Management Act*). The additional revised text provided in response to the Round 1 comment (i.e., "Herbicide action will be targeted through the use of a backpack sprayer or wick or similar mode of application") will not be revised in the IPMP. However as indicated in response to #630, prior to the use of chemical treatment for invasive plant species, BW Gold will provide in the required invasive plant treatment plan with detailed methods and a clear justification of why other management methods are not being used (per the LDN Herbicide Policy, August 2022). BW Gold anticipates future updates to the IPMP in consideration of updates to current policies or other Indigenous nations policies received (see Section 12 of the IPMP).		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
673	Appendix 9-G	Invasive Plant Management Plan Section 8.2.2.1	LDN_UFN		Jun 06, 2022	1	New		No	Include information on spills within the IPMP. At minimum reference documents that discuss how to deal with a herbicide spill.	Herbicide use and management of potential herbicide spills is provided in Appendix F of the Invasive Plant Management Plan.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
674	Appendix 9-G	Invasive Plant Management Table 8.2-3	LDN_UFN		Jun 06, 2022	1	New		No	Please clarify the difference between the 2m and 5m PFZ requirements under glyphosate applications	Table 8.2-3 of the Invasive Plant Management Plan details the permitted glyphosate application with regards to a 2m and 5m PFZ.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
675	Appendix 9-G	Invasive Plant Management Table 8.2-3	LDN_UFN		Jun 06, 2022	1	New		No	Change to 74(2) to follow the regulation language of "up to but not below the high water mark of a temporary free-standing body of water and over dry streams" glyphosate regulation for clarity	The text in the row that references regulation clause 74(2) in Table 8.2-3 of the Invasive Plant Management Plan will be replaced with recommended language: "up to but not below the high water mark of a temporary free-standing body of water and over dry streams". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
675	Appendix 9-G	Invasive Plant Management Table 8.2-3	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing

676	Appendix 9-G	Invasive Plant Management Plan Section 9.0	LDN_UFN		Jun 06, 2022	1	New		No	"Treatments applies after flowering will involve the removal and disposal of seed heads to an appropriate waste disposal location" If a plant is in flower, chemical treatment often shocks it into seed. Is BW Gold committing to removing all seed heads from site if chemical treatment has occurred after flowering or only mechanical? How will this be recorded and monitored? most monitoring activities will occur between late spring and early summer" Please be explicit with what exact monitoring activities will take place at this time.	A qualified professional will determine if chemical treatment is required and the most appropriate timing for the invasive species. As stated in Section 8.2.2.1 of the Invasive Plant Management Plan (IPMP), a combination of more than one control strategy may be the most effective for the successful management of invasive plants. Therefore, if removal of seed heads are required after chemical treatment, then seed heads will be collected and disposed of in an appropriate waste disposal location. Monitoring activities as identified in Table 9-1 will be completed to monitor the effectiveness of treatment. In this scenario (i.e.., treatment of the flowering plant), monitoring will not be limited to only late spring and early summer, and will be directed by the Environmental Manager, who will designate a qualified professional to conduct follow-up monitoring to document treatment efficacy and document and report the activities, findings and recommendations to the EM (Section 9 of the IPMP).	'TD to revie	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 20	Ready for Publishing
676	Appendix 9-G	Invasive Plant Management Plan Section 9.0	LDN_UFN		Jul 22, 2022	2	Follow Up		No	BW Gold responses have been noted.	BW Gold acknowledges the response and no additional response is required.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 2	Ready for Publishing
677	Appendix 9-G	Invasive Plant Management Plan Section 9.1	LDN_UFN		Jun 06, 2022	1	New		No	"all data will be transferred toa database" An internal BW Gold database? Or into IAPP?	All incidental observations will be retained in an onsite database and provided to IAPP via an IAPP report (see Appendix G of the Invasive Plant Management Plan (IPMP)). Additionally, as outlined the Section 10.2 (Record Keeping) of the IPMP, all monitoring data will be entered into a suitable electronic database. The EM will report key results of invasive plant monitoring to the Blackwater Environment Committee and Indigenous Groups during routine meetings.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
678	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jun 06, 2022	1	New		No	"For each invasive plant observation, photograph, record GPS" What will happen to this data? Will it entered into IAPP?	All incidental observations will be retained in an onsite database and provided to IAPP via an IAPP report (see Appendix G of the Invasive Plant Management Plan (IPMP)) and as outlined the Section 10.2 (Record Keeping) of the IPMP all monitoring data will be entered into a suitable electronic database. The EM will report key results of invasive plant monitoring to the Blackwater Environment Committee and Indigenous Groups during routine meetings.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
679	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jun 06, 2022	1	New		No	Define 'proximate' more. 10m? 100? Surrounding the known infestation	-	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
679	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jul 22, 2022	2	Follow Up	Clarification	No	For row 2, why are only two sites chosen to be monitored? And, in row 7 (treated areas), define 'monitor area for treatment area for spread' i.e., 100m surrounding known infestation	As previously responded: The following text will be added to row 2 in Table 9-1: "Monitor areas proximate to ~~two~~ known sites (in areas of disturbance within 100 m of the known infestation areas)." Only 2 infestations were recorded during previous baseline assessments; this may change following the 2022 assessment. For clarity the 'two' will be removed from the update. Row 5 (Treated areas) of Table 9-1 will be revised as follows: "Monitor area within 100 m of treatment area for spread." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	rt; Aug. 2	Ready for Publishing
680	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jun 06, 2022	1	New		No	Report-a-weed has changed to Report Invasives. Are workers trained in using the app?	This responsibility will remain with the EM and delegates. Any opportunistic observations by workers will be relayed to the EM and suitably trained delegates to enter the information.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
680	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jul 22, 2022	2	Follow Up		No	Report a Weed has changed to Report Invasives. This needs updating in the IPMP	The reference to 'Report-a-Weed' program will be replaced with 'Report Invasives' in the Invasive Plant Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	rt; AUG 2	Ready for Publishing
681	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jun 06, 2022	1	New		No	In disturbed areas, what will happen if infestations are observed/recorded?	Table 9-1 of the Invasive Plant Management Plan identifies actions to be completed (Row 2- Known locations of invasive species), which includes investigation by a qualified professional to assess treatment control requirements.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
682	Appendix 9-G	Invasive Plant Management Plan Section 9	LDN_UFN		Jun 06, 2022	1	New		No	Please clarify who will be conducted invasive plant treatment monitoring. It is unclear.	A qualified professional or someone under the direct supervision of a qualified professional will conduct monitoring to assess the efficacy of invasive plant treatment.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
683	Appendix 9-G	Invasive Plant Management Plan Table 9-1	LDN_UFN		Jun 06, 2022	1	New		No	In newly disturbed areas, will treatment take place within the "six weeks prior to disturbance" window?	The statement in Table 9-1 of the Invasive Plant Management Plan (IPMP): "Six weeks prior to disturbance if not recently surveyed." does not refer to 'treatment' of disturbed areas. The timing refers to monitoring of newly disturbed areas and not yet vegetated. Treatment and control measures are discussed in Section 8.2.2 of the IPMP, with timing of treatment to be determined by the invasive plant species and area of infestation.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 20	Ready for Publishing
684	Appendix 9-G	Invasive Plant Management Plan Appendix D; Table 5-1	LDN_UFN		Jun 06, 2022	1	New		No	"keep equipment yards and storage areas free of invasives" Suggest adding "by following best management practices outlined in the IPMP"	The following text will be added to Appendix D Table 5-1 in the next iteration of the Invasive Plant Management Plan: "by following best management practices outlined in the IPMP". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
685	Appendix 9-G	Invasive Plant Management Plan Appendix D; Table 5-1	LDN_UFN		Jun 06, 2022	1	New		No	"conduct pre-clearing surveys to identify invasive plant species established by NWIPC" Awkward sentence. NWIPC have not established infestations, perhaps surveyed? However, in the IPMP CCIPC has been referenced for known sites.	The sentence will be revised as follows in the next iteration of the plan: "conduct pre-clearing surveys to identify invasive plant species that have been surveyed by CCIPC." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
685	Appendix 9-G	Invasive Plant Management Plan Appendix D; Table 5-1	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing

686	Appendix 9-G	Invasive Plant Management Plan Appendix F	LDN_UFN		Jun 06, 2022	1	New		No	"Herbicide application must be conducted or supervised by a person who holds a Pesticide Applicator Certificate endorsed for the class of pesticide" Applicators must hold the industrial vegetation and nxious weed certificate. If an assistant is spraying, the supervisor must not be more than 500m from the assistant. The assistant must also hold the assistant applicator certificate. https://www2.gov.bc.ca/gov/content/environment/pesticides-pest-management/certification-training/certificate-training-categories/assistant-applicator	The statement in the Invasive Plant Management Plan will be revised in the next iteration of the plan as follows: "Herbicide application must be conducted by a person who holds an industrial vegetation and noxious weed certificate. If an assistant is spraying, the supervisor must not be more than 500 m from the assistant and the assistant must also hold the assistant applicator certificate." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
686	Appendix 9-G	Invasive Plant Management Plan Appendix F	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
687	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jun 06, 2022	1	New		No	In section 6 it is unclear what the purpose of monitoring is. To survey invasive plant locations? To monitor treatment efficacy? Please specify.	The purpose is outlined under the objectives, the Invasive Plant Monitoring Standard Operating Procedure is an overall monitoring plan to identify invasive species at all project stages and to monitor treatment effectiveness. This will be clarified in the objectives. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 14	Ready for Publishing
687	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
688	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jun 06, 2022	1	New		No	"monitoring should occur a minimum between treatments" Do you mean after treatment?	The following text in Appendix H of the Invasive Plant Management Plan will be revised as follows: "effectiveness monitoring should occur after each treatment". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
688	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
689	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jun 06, 2022	1	New		No	"A second monitoring/survey should occur" Where? Known infestations? Revegetation areas? Be specific.	The following text in Appendix H of the Invasive Plant Management Plan will be revised as follows: "following treatment the treated areas will be inspected and effort will be made to remove remaining viable seed pods before they go to ground". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
689	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
690	Appendix 9-G	Invasive Plant Management Plan Appendix H	LDN_UFN		Jun 06, 2022	1	New		No	"Generally, continuous invasive plant occurrences with less than 100m gap between plants are recorded as one site" Correct, this follows IAPP's guidance. However, it is more beneficial to record all locations so that infestations are easier to find at a later date. 100m could be in any direction of the point. This makes it a large area to monitor if time is limited.	The methods follow IAPPs guidance to survey an area. BW Gold appreciates the suggestion but does not feel the text needs to be modified. As indicated by IAPP, recording the site location with a UTM at the center of the infestation and then making note of the aerial extent will allow monitors to define the infested area in a way that all known occurrences are captured.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
691	Appendix 9-F	Vegetation Management Plan 1	LDN_UFN		Jun 06, 2022	0	New		No	Clarify: Please provide a brief summary of vegetation management activities (e.g., clearing, re-veg) that occurred at the Blackwater site as part of Early Works. Include a list of example activities and planned future works that will be guided by the contents of this management plan. Note that the VMP is intended to mitigate impacts to streams, fish, and wildlife as well.	There has not yet been any clearing as part of Early Works. The VMP applies to construction and operations. Details on mine components, activities, and development schedule are provided in Chapter 3 of the Joint Mines Act/Environmental Management Act Permits Application. As noted by the reviewer, the VMP is intended to impacts to streams, fish, and wildlife. This has been added to Section 2.	No	LDN/UFN	ERM		Tonia	RT	N/A		
691	Appendix 9-F	Vegetation Management Plan 2 (2)	LDN_UFN		Jun 06, 2022	1	New		No	While response does address parts of the above comment, an intro list of "example activities" would still assist in clarification of this section, which is to outline the purpose and objectives of this document. Please state in brief format, with what tools, "example activities," you might use to achieve these goals. Suggestion is to nest a secondary list of item by which to achieve goals under current list items. This document must stand alone w/o reference to outside chapters.	The following text will be added in the next plan iteration after the bullets in Section 2: "see Section 8.0 for a detailed list of mitigation and management measures recommended to achieve these objectives". The preference here is to not duplicate text or to prioritize (highlight) certain activities over others, but rather to direct the reader to the appropriate section to learn about all recommended activities. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
691	Appendix 9-F	Vegetation Management Plan 2 (2)	LDN_UFN		Jul 22, 2022	2	New	Comment	No	Suggest adding StFN and NWFN herbicide use policies as appendices to the plan as they are referenced within the current IPMP	BW Gold acknowledges the comment, however the company has never been provided with a copy of the policy, only been told there is a policy prohibiting use within the StFN and NWFN territories. If a policy is provided, it will be appended in a future iteration the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing

691	Appendix 9-F	Vegetation Management Plan 2 (2)	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	KES does not represent Stfn and NWFN, therefore it is Artemis's responisbility to receive these documents and incorprate them into the plan for us to review and ensure the policies are being followed within the management plan. Within the IPMP it states, "herbicide use will mee the Stfn and NWFN herbicide use policies", however as BW Gold have acknoweldged, "the company has never been provided with a copy of the policy, only been told there is a policy prohibiting use within the Stfn and NWFN territoties". Therefore, please explain how Artemis will follow these policies if they have not receieved or reviewed the documents to begin with? In addition, if herbicide is prohibited in these territories, how will BW Gold implement chemical treatment, and why are they doing so?	The mitigation 'Comply with the StFN herbicide use policy in StFN territory' is mitigation 5-15 of the Mitigation Table, submitted to the Environmental Assessment Offices to address the Environmental Assessment Condition 43. Therefore in the first draft of the Invasive Plant Management Plan (IPMP), BW Gold committed to adhering to StFN and NWFN herbicide use policy. Section 8.2.2 of the IPMP does not state chemical control is the only option for treatment and control of invasive plants; BW Gold will consult Indigenous Nations (along with Cariboo Chilcotin Coast Invasive Plant Committee, and BC Ministry of Environment and Climate Change Strategy) to determine the best strategy for treatment. If, following consultation, it is determined that the herbicide use is not permitted in the territory at which the invasive plant species is identified and that a better alternative is available, an alternative treatment will be developed in consultation with Indigenous nations. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
691	Appendix 9-F	Vegetation Management Plan 2 (2)	LDN_UFN (Danny Smart)		Oct 06, 2022	4	Follow Up		No	KES does not represent Stfn and NWFN, therefore it is Artemis's responsibility to receive these documents and incorporate them into the plan for us to review and ensure the policies are being followed within the management plan. Please confirm that Artemis has received these policies and attach as appendices to the plan. We need to be confident that Artemis are complying with Stfn and NWFN's herbicide policies as stated in the mitigations table (5-17), the IPMP (section 8.2.2.1) and the VMP (section 8.2). Therefore, these must be included as appendices for the IPMP and VMP. Although Artemis have committed to 'consult Indigenous Nations to determine the best strategy for treatment' because these policies have been referenced, they must be reviewed.	Despite BW Gold's requests, StFN and NWFN have not shared their herbicide policies to date. If and when those policies are received, they will be considered in updating the plan as needed. BW Gold is unclear why Keefer Eco needs to be confident that BW Gold is complying with the policies of StFN and NWFN. The plan has been developed based on available information. BW Gold is available to discuss this matter at the convenience of LDN and UFN.		LDN/UFN	BWG		Ryan			TD, Oct 17	Ready for Publishing
691	Appendix 9-F	Vegetation Management Plan 2 (2)	LDN_UFN (Danny Smart)		Nov 17, 2022	5	Follow Up		No	If BW Gold has not received these policies, please explain how you propose to follow their guidelines within the IPMP, VMP, and Riparian SOP where they are referenced.	BW Gold has not received written policies from StFN and NWFN regarding herbicide use in their Traditional Territory. However, SFN, StFN and NWFN have verbally expressed that herbicides are not to be used within their Traditional Territory. In absence of a written policy, BW Gold is committed to complying with the verbal position on herbicide use within Indigenous nation territories. As stated in the Round 5 response to Comment ID#630, the Invasive Plant Management Plan will be updated to reflect that BW Gold will comply with LDN's written herbicide use policy and the verbal position on no herbicide use with the territories of UFN, SFN, StFN, and NWFN. The potential treatment options for invasive plant management will be updated to include cultural control methods (instead of chemical treatment). For associated updates to be completed in the Riparian Management SOP please see the Round 5 response to Comment #1994 and see the Round 5 response to Comment #2122 for associated updates to the Vegetation Management Plan. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG					TD, Nov 24	Ready for Publishing
692	Appendix 9-F	Vegetation Management Plan 1.1 (Table 3-1)	LDN_UFN		Jun 06, 2022	0	New		No	(Table 1.1-1, Department Managers) Clarify: who is the Environmental Superintendent? How is their role defined?	Table 3-1: BW Gold Roles and Responsibilities has been revised to state that the Departmental Managers report to the Mine Manager. BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold has discussed the best approach with EMLI, and we will track all edits and submit updated plans toward the end of the Application Review process. As appropriate, updated plans will then be filed with other relevant regulators and Indigenous nations.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
692	Appendix 9-F	Vegetation Management Plan 1.1 (Table 3-1)	LDN_UFN		Jun 06, 2022	1	New		No	Comment not addressed in the reply. Clarifications regarding the qualifications of the Environmental Superintendent (QP ??) and their role in management should be added to table 3-1. There is no mention of such a person in the table.	Table 3-1 (Blackwater Gold Roles and Responsibilities) lists the responsibilities of the Environmental Manager (EM) or designate. The EM and designate have the overall responsibility for environmental management on site, supported by technical field staff and consulting qualified professionals. The Environmental Superintendent is a designate of the EM. Therefore, the Environmental Superintendent will not be added to Table 3-1.	T/TD to revie	LDN/UFN	ERM	BWG	Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
693	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.1)	LDN_UFN		Jun 06, 2022	0	New		No	Add: Migratory Birds Convention Act; Weed Control Act and Regulation; Integrated Pest Management Act and Regulation; Environmental Management Act; Mitigation Hierarchy Policy; Health, Safety, and Reclamation Code for Mines in BC	The suggested legislation has been added to Section 4.1 Legislation of the VMP. BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold has discussed the best approach with EMLI, and we will track all edits and submit updated plans toward the end of the Application Review process. As appropriate, updated plans will then be filed with other relevant regulators and Indigenous nations.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
693	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.1)	LDN_UFN		Jun 06, 2022	1	New		No	No mention of the Regulations (Weed control Act), Environmental Management Act or Mitigation Hierarchy Policy.	The following will be added to Section 4.1 of the Vegetation Management Plan: "Weed Control Regulation (as a sub-section of the Weed Control Act)." The Environmental Management Act will also be added but is more appropriately referenced under other EMPs. Only Acts and Regulations are included in this list, it does not extend to the Policy level.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
693	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.1)	LDN_UFN		Jul 22, 2022	2	Follow Up	Clarification	No	The Environmental Management Act is an Act and should be listed in this section. Please clarify where the Mitigation Hierarchy Policy will be added.	The environmental mitigation policy will be added to Under Guidelines and Best Management Practices. BW Gold recognizes the Environmental Management Act is an Act and as stated in the response to Round 1 comments the Act will be listed in the Vegetation Management Plan (Section 4.1).		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 2	Ready for Publishing
693	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.1)	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	The Environmental Management Act was not previously added to the VMP following round 1 comments. Please ensure it is added for round 3.	BW Gold acknowledges the comment and commits to referencing the Environmental Management Act in Section 4.1 of the Vegetation Management Plan. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Sept 14	Ready for Publishing

694	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.3)	LDN_UFN		Jun 06, 2022	0			No	Add: How will vegetation be disposed of if not retained for reclamation purposes? Open Burning and Smoke Control Regulation may be applicable if waste wood is to be burned on-site. May be more suitable to the Air Quality and Dust MP?	The purpose of this section (Existing Permits) is to identify the Project's existing authorizations that include conditions related to vegetation management. BW Gold may apply for an open burning permit for disposal of woody debris that is not suitable for reclamation, if required.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
694	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 27, 2022	2	Follow Up		No	We want a firm commitment from BW Gold to have ongoing consultation with LDN and UFN on the development and approval of these permits	BW Gold has an agreement which sets out requirements for engaging on regulatory permitting matters and is committed to following the agreement.	No	LDN/UFN	ERM	BWG	Tonia	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing
694	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.3)	LDN_UFN		Jun 06, 2022	1	New		No	The Nations request to review any future permit applications and understand how the potential impacts of those permits may impact other MPs that are implemented on site.	BW Gold will continue to engage with the Nations on permit applications in accordance with established practice (e.g. in agreements) and/or as directed by regulators.	No	LDN/UFN	ERM	BWG	Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
695	Appendix 9-F	Vegetation Management Plan 1.2.3 (4.3)	LDN_UFN		Jun 06, 2022	0			No	Clarify: anything in the license to cut permit to mention?	There are no conditions related to vegetation management in the license to cut permit.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
695	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 27, 2022	2	Follow Up	Information Requirement	No	We want a firm commitment from BW Gold to have ongoing consultation with LDN and UFN on the development and approval of these permits	BW Gold has an agreement which sets out requirements for engaging on regulatory permitting matters and is committed to following the agreement.	No	LDN/UFN	ERM				Ready for Submission	RT; Aug. 2	Ready for Publishing
695	Appendix 9-F	Vegetation Management Plan 1.2.1 (4.3)	LDN_UFN		Jun 06, 2022	1	New		No	The Nations request to review the permit to confirm.	Copies of the permits can be made available to the reviewer through a request to the BW Gold Environmental Manager.	No	LDN/UFN	ERM	BWG	Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
696	Appendix 9-F	Vegetation Management Plan 1.2.4 (4.4)	LDN_UFN		Jun 06, 2022	0			No	Clarify: Several well-established guidance documents are listed here, but the only ones that I can find with in-text references are the BCTS Windthrow Manual and the Fish-stream Crossing Guidebook. Are there references missing?	The references identified by the reviewer have been included in Section 4.4 Guidelines and Best Management Practices. BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold has discussed the best approach with EMLI, and we will track all edits and submit updated plans toward the end of the Application Review process. As appropriate, updated plans will then be filed with other relevant regulators and Indigenous nations.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
696	Appendix 9-F	Vegetation Management Plan 1.2.4 (4.4)	LDN_UFN		Jun 06, 2022	1	New		No	This comment refers to in text refences. It states that the reviewer did not find many of these guideline documents referenced within the text. I have revised it and did found that about 50% were referenced with the body of the document, however, that still means many were not. Consider adding more information sources within your text to support your plan.	A check will be done to add in more BMP/Guideline references within VMP text, if appropriate. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
697	Appendix 9-F	Vegetation Management Plan 2.1 (6)	LDN_UFN		Jun 06, 2022	0			No	Add: Please describe the type(s) of educational material you will provide to your site personnel. What will be covered in said material and who will provide the training? Will a worker training record be kept?	Section 6 Training and Awareness now reads: Educational material has not yet been developed for the Project. A person with experience in vegetation management will work with BW Gold to develop educational materials. A BW Gold employee will provide the training. BW Gold recognizes that management plans may need various updates as a result of permitting.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
697	Appendix 9-F	Vegetation Management Plan 2.1 (6)	LDN_UFN		Jun 06, 2022	1	New		No	I do not see these phrases anywhere in section 6. After a second review of this document, I like the previous reviewer would like to see more details in this section.	Section 6 was edited further following the initial proposed proponent response (above). Details requested in the earlier comment have somewhat been addressed, but more detail will be added Section 6 to clarify 'what will be covered'. The following text will be added to Section 6: "Site Orientation training will include information about vegetation setbacks/buffers and boundaries and the requirement to respect those areas; details about clearing windows and the requirement to engage environment staff prior to planning any clearing activities; mitigation measures for limiting soil disturbance and dust control; and, a discussion of more specialized	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
697	Appendix 9-F	Vegetation Management Plan 2.1 (6)	LDN_UFN		Jul 27, 2022	2	Follow Up	Information requirement	No	BW Gold response has been acknowledged. Please clarify/add who will be conducting the training and if a worker training record will be kept (as per previous comment) as it is currently unclear if this will be included in the updated plan. Further explain: "A person with experience in vegetation management will work with BW Gold to develop educational materials. A BW Gold employee will provide the training." How much experience,	The Blackwater Gold Project Site Orientation will be completed by the Health, Safety, and Environment team. A suitably trained member of the BW Gold team will be responsible for orientation delivery. A worker training record will be maintained for orientation. This info will be added to the next iteration of the plan. The Site Orientation materials are limited in scope and cover the important high level topics such as 'obey clearing boundaries, let the environment team know if you need to clear an area so that they can determine	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing

698	Appendix 9-F	Vegetation Management Plan 2.1 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.1-1, Pre-clearing) Add: Please list the types of pre-disturbance surveys to be performed prior to beginning clearing activities or disturbance of vegetation. Include references for the surveys where applicable and the setback distance tables.	Table 8.1-1: General Mitigation Measures (pre-clearing now reads: - "Coordinate the timing of vegetation clearing and construction activities to occur outside of sensitive time periods (e.g., breeding birds, amphibians, fish). However, if vegetation clearing must occur during the sensitive season for a particular wildlife or fish species, conduct pre-clearing surveys prior to the planned timing of the clearing occurrence, to confirm a species is not present. If a species is present, establish setback buffers (See Table 3.2-1 in the WMMP for wildlife sensitive time periods and guidelines for buffers). - Coordinate in-water work within reduced risk work window (July 15 to August 31) in Region 7- Omineca (BC MWLAP 2004b). If in-water work must occur outside of the least risk work window, mitigation measures will be identified to avoid harm to fish in consultation with Aboriginal Groups, subject to Fisheries Act authorization. - Conduct pre-clearing surveys to identify environmentally sensitive features (e.g., riparian areas) that may interact with clearing and construction activities, taking into account setbacks in Table 8.3-1. Map and flag sensitive features and identify management actions (with restrictions, e.g., no heavy machinery, refueling, etc..) around these features, where possible. '- Conduct windthrow hazard assessments along all new openings greater than 1 ha referencing to BCTS Windthrow Manual: A Compendium of Information and Tools for Understanding, Predicting and Managing Windthrow on the BC Coast (Zielke et al. 2010). - Prior to commencement of clearing, map and flag sensitive features to identify no-work zones (with restrictions, e.g., no heavy machinery, refueling, etc..) around these features, where possible. BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold has discussed the best approach with EMLI, and we will track all edits and submit updated plans toward the end of the Application Review process. As appropriate, updated plans will then be filed with other relevant regulators and Indigenous nations.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
698	Appendix 9-F	Vegetation Management Plan 2.1 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	"I do not see a list of pre-construction surveys, only riparian is mentioned. Otherwise most of your response is in the table, though not exactly as stated here. Also, there is a typo in point 4..."(Reference: .....(Zielke et al. 2010)."" either add or remove bracket."	Under the first bullet in Table 8.1-1 (clearing), the requirement to conduct pre-clearing surveys during the breeding bird window is also listed. Additional mitigations will be referred to specifically in Table 8.1-1 (Pre-clearing), including pre-clearing surveys for listed plants/communities and at-risk plants (within areas identified in Section 7.0/Appendix A2) and pre-clearing surveys for invasive plants prior to clearing (and to manage prior to clearing). Section 3.3 (Pre-clearing and Construction Management) of the Wildlife Mitigation and Monitoring Plan will also be referenced in the Vegetation Management Plan (Table 8.1-1). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 20	Ready for Publishing
698	Appendix 9-F	Vegetation Management Plan 2.1 3.1 (Table 8.1-1)	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	To address the comment "please list the types of pre-disturbance surveys to be performed prior to beginning clearing activities" please add additional information to the edited bullet point. For example, nest sweeps following X protocol, rare plant surveys following Y protocol, riparian areas following Z protocol	BW Gold has referenced the management plan (and relevant section of the plan) regarding the types of surveys to be performed prior to beginning clearing activities instead of providing the detail as indicated by the reviewer (in the revised Table 8.1-1). This is because surveys or protocols (e.g., invasive plants surveys) are subject to multiple conditions outlined in the management plan. This comprehensive approach to provide the reference to the section of the management plan where the protocols/BMPs are detailed limits perception by the reader that one plan can superceed other plan requirements..	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing
698	Appendix 9-F	Vegetation Management Plan 2.1 3.1 (Table 8.1-1)	LDN_UFN (Danny Smart)		Sep 01, 2022	3	Follow Up		No	Following up on commetn 0, the final bullet point was not added to the amended plan ("prior to commencement of clearing, map and flag sensitive features to identify no-work zones (with restrictions e.g., no heavy machinery, refuelling etc.) around these features where possible). Please make sure this is added to the updated plan. Within the pre-clearing section of Table 8.1-1, management plans and relevant reference sections have not been referenced. Please update.	Text in Table 8.1-1 (Pre-clearing) of the Vegetation Management Plan (VMP) to address the Round 0 last bullet response willl be modified and presented in the next iteration of the VMP as follows: "Conduct pre-clearing surveys to identify environmentally sensitive features (e.g., riparian areas, listed species) that may interact with clearing and construction activities, taking into account riparian setbacks in Table 8.3-1. Map and flag sensitive features and identify management actions (e.g., restrictions, no heavy machinery, no refueling, etc.)." The response to the Round 2 comment ID#698 incorrectly referred to the revised Table 8.1-1 (a revised VMP was not issued following Round 2 comments). In the next iteration of the VMP, BWG will provide references to the management plan (and relevant section of the plan) regarding the types of surveys to be performed prior to beginning clearing. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Sept 14	Ready for Publishing
699	Appendix 9-F	Vegetation Management Plan 3.1 (Table	LDN_UFN		Jun 06, 2022	0			No	(Table 3.1-1, Pre-Clearing) Clarify: Will the clearing boundaries, setbacks, and riparian boundaries be ribboned prior to clearing operations?	See response to cmt 15.	No	LDN/UFN	ERM		Tonia	RT	N/A		
699	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	There is no mention of flagging boundaries (they do not qualify as a sensitive feature). Please clarify this point to include that boundary layout and flagging, flagging of RMAs and setbacks will be done prior to clearing.	The following text will be added to Table 8.1-1 (clearing) of the Vegetation Management Plan: "Boundary layout will be completed prior to clearing and clearly delineated with flagging. RMAs and setback buffers will also be clearly identified and established prior to clearing. All clearing boundaries and setback buffers will be walked and reviewed with clearing crews prior to clearing." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
699	Appendix 9-F	Vegetation Management Plan 3.1 (Table	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
700	Appendix 9-F	Vegetation Management Plan 3.1 (Table	LDN_UFN		Jun 06, 2022	0			No	(Table 3.1-1, Clearing) Clarify: where is soil windrowing being proposed?	Soil windrowing is not being proposed at the Project therefore the mitigation regarding soil windrowing has been removed from the VMP.	No	LDN/UFN	ERM		Tonia	RT	N/A		
700	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	Can we add that verry response into the document to inform and clarify that that will not be happening.	The statement will be incorporated into the next iteration of the Vegetation Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing

700	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	GM; Aug 15	Ready for Publishing
701	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.1-1), Clearing) Clarify: "In areas with sensitive features (old-growth forests, at risk ecosystems, and riparian areas) where clearing cannot be avoided but soil disturbance is not required (e.g., road edges, clearing required to create safe setbacks from forest to buildings)," Please reword this sentence to avoid a double negative. Consider "sensitive environmental features" and include potential environmental features discovered during your pre-clearing surveys (e.g., dens, nests, rare plants, etc..). Do alternative measures include different methods, such as hand-falling or clearing on frozen ground?	Table 8.1-1: General Mitigation Measures regarding clearing has been revised as follows: - "In areas with sensitive features, where clearing cannot be avoided and soil disturbance is not required (e.g., road edges or to create safe setbacks from forest to facilities), use low-disturbance methods to clear vegetation in areas with sensitive environmental features identified during pre-clearing surveys and removal techniques that are most appropriate, such as pruning, mowing, girdling, topping, and hand-falling, or clearing on frozen ground." BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold has discussed the best approach with EMLI, and we will track all edits and submit updated plans toward the end of the Application Review process. As appropriate, updated plans will then be filed with other relevant regulators and Indigenous nations.	No	LDN/UFN	ERM		Tonia	RT	N/A	TD, Jun 29	Ready for Publishing
701	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	Comment requested including list of potential features. Please add. Otherwise very good.	Features that could be considered in the above response are fairly limited and subject to conditions, the following features will be added: within riparian setbacks (if permitted), within a nest/den setback under the supervision of a qualified professional and where rare plants/communities are present under the supervision/direction of a qualified professional. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
701	Appendix 9-F	Vegetation Management Plan 3.1 (Table	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
702	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.1-1, Post-Clearing) Add: mention of BMPs to limit effects on soil hydrology, add specific references to list in 1.2.4	Table 8.1-1: General Mitigation Measures post-clearing mitigation measures has been revised to include the following BMPs (that have citations amd are included in the list of BMPs provided in Section 4.4): Soil Conservation Planning and Practices in the Quesnel and Vanderhoof Forest Districts (FPB 2010); Aggregate Operators Best Management Practices Handbook for British Columbia Volume II (BC MEM 2002)	No	LDN/UFN	ERM		Tonia	RT	N/A		
702	Appendix 9-F	Vegetation Management Plan 3.1 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	There is no in text reference to BC MEM 2002 anywhere in the table or document as a whole. This is one of the guidance documents mentioned in comment number 11 (50% not mentioned)	Table 8.1-1 (Post-clearing) of the Vegetation Management Plan will be revised in the next iteration to include the reference BC MEM 2002 when there is discussion of ESC measures. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RTI June 19	Ready for Publishing
702	Appendix 9-F	Vegetation Management Plan 3.1 (Table	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
703	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	0			No	Add: Please include map of or reference to a map of listed plant observations and known environmental features relevant to vegetation management works.	Section 7 summarizes terrestrial baseline information. Table 7.1-2 lists traditional use plants identified by Aboriginal Groups that may be present in the mine site.	No	LDN/UFN	ERM		Tonia	RT	N/A		
703	Appendix 9-F	Vegetation Management Plan 3.2 (7)	LDN_UFN		Jun 06, 2022	1	New		No	No map that shows known trad use plant sites or identified sites of BC listed or SARA plants (i.e.. plant observations). Please add.	Whitebark pine (SARA Schedule 1) within the mine site is provided in Figure 7-1 of the Vegetation Management Plan (VMP). A second figure will be added for provincially listed species at risk: sickleleaf tomentypnum moss (Tomentypnum falcifolium), small-flowered lousewort (Pedicularis parviflora spp. parviflora), swollen beaked sedge (Carex rostrata) and meesia moss (Meesia longiseta) in the next version of the VMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
703	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
704	Appendix 9-F	Vegetation Management Plan 3.2 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	Clarify: Please define "no-work-zone".	References to "no work zones" have been removed and the commitment in Table 8.1-1 now reads conduct pre-clearing surveys to identify environmentally sensitive features (e.g., riparian areas) that may interact with clearing and construction activities, taking into account riparian setbacks in Table 8.3-1. Map and flag sensitive features and identify management actions (e.g., with restrictions, e.g., no heavy machinery, refueling, etc..).	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing

704	Appendix 9-F	Vegetation Management Plan 3.2 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	Does this mean you will not be implementing any "no work zones"? What if a feature is identified that requires the use of a no work zone, such as a GAR order for example.	Setback buffers or riparian setbacks have been identified in Table 8.1-1 (Pre-clearing) instead of "no work zones". The management of actions within the buffers will be identified specific to the area and the identified sensitive species/habitat. Should a Government Action Regulation (GAR) order be implemented that overlaps with Project Activities, BW Gold will consult with ministry staff to adhere with the regulation.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
704	Appendix 9-F	Vegetation Management Plan 3.2 (Table	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
705	Appendix 9-F	Vegetation Management Plan 3.2 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.3-1) Add: Please list additional BMPs that will be implemented while clearing inside RRZ areas. Additional awareness training for operators, monitoring procedure and reporting, site-specific mitigation plan? Standards and Best Practices for Instream Works (2004); Health, Safety, and Reclamation Code for Mines in BC Section 9.5.1 (3); Fish-stream Crossing Guidebook Section 5.1. Also, please include a list of reasons clearing may occur inside the RRZ.	Clearing mitigations specific to clearing inside RRZ areas is provided for Clearing Activities in Table 8.3-2. Clearing may occur within RRZs of the transmission line right of way, and will follow the Integrated Vegetation Management Plan for BC Hydro Transmission and Distribution Power Line Corridors (BC Hydro 2016) in addition to Approved Work Practices for Managing Riparian Vegetation (BC Hydro 2003) and Measures to Protect Fish and Fish Habitat (DFO 2019). The following reasons that clearing may be required in RMZ required for health and safety reasons, to reasons to emergency spill response or stabilize a slump due to natural erosion processes) have been added to Section 8.3..	No	LDN/UFN	ERM		Tonia	RT	N/A		
705	Appendix 9-F	Vegetation Management Plan 3.2 (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	Comment does not address the request to reference the use of the health and safety Code for Mines, BMP for instream works or crossing guidebook which addresses the additional awareness training for operators, monitoring or site-specific mitigation plans.	A Riparian Area Management Standard Operating Procedure (SOP) was provided as Appendix A3 of the Vegetation Management Plan. The references identified by the reviewer will be identified for additional references in the SOP for the safe and efficient work practices to manage and protect riparian areas. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
705	Appendix 9-F	Vegetation Management Plan 3.2 (Table	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
706	Appendix 9-F	Vegetation Management Plan 3.3 (Table	LDN_UFN		Jun 06, 2022	0			No	(Table 3.3-2) Edit: Please use bullet points inside the table to distinguish between BMPs.	Bullet points have been added to Table 8.3-2 to distinguish between BMPs.	No	LDN/UFN	ERM		Tonia	RT	N/A		
706	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	Table 8.3-2 is a representation of RMA buffers. Are we sure this comment is regarding this table?	The comment [ID#706] is regarding Table 8.3-3 in the April submission of the Vegetation Management Plan.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
707	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.3-2, ESC) "qualified sediment and erosion control professional should assess the potential for erosion" Please replace "should" with "will", and elaborate on what circumstances require a site-specific ESC plan. Also, please refer to the appropriate section of relevant Blackwater MPs. Is this sentence referring to a CPESC and/or PAg? Please specify.	Table 8.3-2: Mitigation Measures for Riparian Areas has been revised and now reads : - Prevent the release of silt, sediment or sediment-laden water, raw concrete or concrete leachate, or any other deleterious substances into any ditch, watercourse, ravine or storm sewer system; and - Implement erosion control measures (e.g., proper ditching, reducing slopes and placement of soil salvage piles, diversion and runoff collection ditches, sediment control ponds, erosion control mats and use of flocculants) as described in the SEPSCP, section 7.3. Examples of where site-specific ESC plans may be will be developed for plant site; borrow pits, tailings dam or other dams construction sites; freshwater reservoir and dams, areas with significant soil or overburden stripping/salvage.	No	LDN/UFN	ERM		Tonia	RT	N/A		

707	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	Same comment as above regarding table number. (8.3-3, not 8.3-2) Phrase, "prevent the release of silt, sediment or sediment-laden water, raw concrete or concrete leachate, or any other deleterious substances into any ditch, watercourse, ravine or storm sewer system; and" is not found anywhere in this table. Please insert that last response into the document to add clarity on if and when these ESC plans might be developed. Please clarify qualifications of the QP	Riparian Area Management Standard Operating Procedure (SOP) mitigation measures are detailed in Appendix A3 (as referenced in Section 8.3 of the Vegetation Management Plan (VMP)). Prevention of the release of deleterious substances is provided in this SOP. The reference to the prevention of the release of deleterious substances will also be provided in Table 8.3-3 of the VMP. The statement regarding where site-specific ESC plans may be developed will be provided in Section 8.3 of the VMP. As stated in the Section 8.2 of the Surface Erosion Prevention and Sediment Control Plan (SEPSCP), "ESC measures will primarily be field-fit based on conditions encountered in the field, under the direction of the Environmental Monitor." In addition, the Section 9 of the SEPSCP indicates that BW Gold will engage suitably qualified individuals to supervise the construction activities. Section 11 of the SEPSCP indicates that: "Once the ESC measures have been installed, their effectiveness will be monitored by the Environmental Monitor, and maintenance will be carried out, as necessary. All ESC measures will be inspected by the	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
707	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jul 27, 2022	2	Follow Up	Clarification	No	As per the first comment, BW Gold comment (below in " ") is not included in the plan or the SOP. Please add. "Table 8.3-2: Mitigation Measures for Riparian Areas has been revised and now reads : - Prevent the release of silt, sediment or sediment-laden water, raw concrete or concrete leachate, or any other deleterious substances into any ditch, watercourse, ravine or storm sewer system; and - Implement erosion control measures (e.g., proper ditching, reducing slopes and placement of soil salvage piles, diversion and runoff collection ditches, sediment control ponds, erosion control mats and use of flocculants) as described in the SEPSCP, section 7.3." Please provide sentence to address "where site-specific ESC plans may be developed will be provided in section 8.3 of the VMP" as per BW gold response	Table 5.1-2 (bullet #10) in the Riparian Area Management Standard Operating Procedure (SOP) states (Appendix A3 of the Vegetation Management Plan): "Prevent sediment and deleterious substances from entering the stream by implementing sediment and erosion control measures in accordance with the Surface Erosion Prevention and Sediment Control plan." This bullet will also be provided in Table 8.3-3 of the Vegetation Management Plan. BW Gold approach to management plans is to focus each plan or SOP, to the extent possible, as closely as possible on a specific value. When cross-over text is included it can create misunderstanding about priority management methods and objectives and/or requires edits in multiple plans when revisions are made to one plan. BW Gold's preference is to refer the reader to the management plan where the most comprehensive discussion about a mitigation measure is included. With reference to terms, deleterious encompasses all of the listed substances that could enter a stream and the term stream encompasses all the potential types of streams/waterbodies (as defined in the Fisheries Act and the WSA). These all encompassing terms are preferred because they are comprehensive. As indicated in response to the Round 1 comment Section 8.3 will provide a statement regarding where site-specific Erosion and Sediment Control plans may be developed. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing
707	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Sep 01, 2022	3	Follow Up		No	Referring to Round 0, BW Gold's response states that the following bullet points will be included in Table 8.3-3 Mitigation Measures for Riparian Areas of the VMP. The bullet points are not included in the VMP. To omit confusion of these details, the revised version of the VMP must include this information. These sentences are also not included in the current Riaparian Area Management SOP. Please update and include. - Prevent the release of silt, sediment or sediment-laden water, raw concrete or concrete leachate, or any other deleterious substances into any ditch, watercourse, ravine or storm sewer system; and - Implement erosion control measures (e.g., proper ditching, reducing slopes and placement of soil salvage piles, diversion and runoff collection ditches, sediment control ponds, erosion control mats and use of flocculants) as described in the SEPSCP, section 7.3. These sentences are also not included in the current Riaparian Area Management SOP. Please update and include.	The last row of Table 8.3-3 (Sediment and Erosion Control) will be revised to state: 'The SEPSCP (Best Management Practices) will be implemented and will identify erosion control measures (e.g., proper ditching, reducing slopes and placement of soil salvage piles, diversion and runoff collection ditches, sediment control ponds, erosion control mats, and use of flocculants)." As stated in the response to the Round 2 comment the following statement will be provided in the Vegetation Management Plan "Prevent sediment and deleterious substances from entering the stream by implementing sediment and erosion control measures in accordance with the Surface Erosion Prevention and Sediment Control plan." BW Gold's preference is to refer the reader to the management plan where the most comprehensive discussion about a mitigation measure is included. With reference to terms, deleterious encompasses all of the listed substances that could enter a stream and the term stream encompasses all the potential types of streams/waterbodies (as defined in the *Fisheries Act* and the WSA). These all encompassing terms are preferred because they are comprehensive. The statements will be included in the next iteration of the Riparian Area Management Standard Operating Procedure		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
708	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.3-2, Construction Activities) Clarify: "streams by vehicles and/or heavy machinery (unless at an existing road or ford crossing), unless authorized as a special provision in a site-specific prescription or with specific regulatory agency approval." Temporary crossing through a stream by way of a ford makes sense to me, but I don't see how you can be on a road crossing and go throug a stream unless your crossing structure is underwater. Please clarify and provide reference where applicable. Consider breaking this into several points. Include fording procedure and relevant BMPs or reference section of guidance document.	Table 8.3-2: Mitigation Measures for Riparian Areas has been revised regarding construction activities to remove ford crossing and edited as follows: "- Avoid crossing through streams by vehicles and/or heavy machinery. Refer to the Fish-Stream Crossing Guidebook Part 2: Fish-stream Crossings: Design, Installation, and Maintenance Considerations (BC MFLNRO, BC MOE and DFO 2012) for stream crossings."	No	LDN/UFN	ERM		Tonia	RT	N/A		
708	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	No such phrase exists within table 8.3-3, " Avoid crossing through streams by vehicles and/or heavy machinery. Refer to the Fish-Stream Crossing Guidebook Part 2: Fish-stream Crossings: Design, Installation, and Maintenance Considerations (BC MFLNRO, BC MOE and DFO 2012) for stream crossings."	This mitigation measures has been included in Appendix A3 (SOP for Riparian Area Management): "Use temporary crossing structures (rather than fording) to transport machinery across streams. If this is not possible, locate fords in areas with shallow, stable banks and limit crossings to once over and back". The reference (BC MFLNRO, BC MOE and DFO 2012) will be added to this text. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
708	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jul 27, 2022	2	Follow Up	Clarification	No	As per BW Gold response to comment 0 of ID 708, include suggested updates directly into the plan. In addition, add a specific appendices reference (i.e., A3) for further clarity on the comment. For example, update the plan to include: "Avoid crossing through streams by vehicles and/or heavy machinery. Refer to the Fish-Stream Crossing Guidebook Part 2: Fish-stream Crossings: Design, Installation, and Maintenance Considerations (BC MFLNRO, BC MOE and DFO 2012) for stream crossings. See further details in Appendix A3"	BW Gold's preference is to refer the reader to the details provided in the Standard Operating Procedure (SOPs) or management plan where the most comprehensive discussion about a mitigation measure is included. This avoid unnecessary updates to multiple plans and SOPs. Table 8.3-3 will be revised as follows "Avoid crossing through streams by vehicles and /or heavy machinery; however if required crossings will be in accordance with the Riparian Area Management SOP." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing
709	Appendix 9-F	Vegetation Management Plan 3.3 (Table	LDN_UFN		Jun 06, 2022	0			No	(Table 3.3-2, Construction Activities) Clarify: "Restrict debris from remaining within the high-water mark or placed into a stream without specific regulatory agency approval." Please clarify what is meant by "debris", and when it is appropriate for it to enter a stream, be left in a stream, and/or placed in a stream. Approval from which regulatory agency and in what context?	Table 8.3-2: Mitigation Measures for Riparian Areas has been revised regarding construction activities as follows: " Remove all slash and debris from felling and place it outside the RMA." After forest clearing, debris would consist of non-living, up-rooted fragments of vegetation.	No	LDN/UFN	ERM		Tonia	RT	N/A		

709	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	Not certain if comment was requesting the clarification be in the table but a reference here would be helpful. Which guidelines apply here?	The reference (BC MFLNRO, BC MOE and DFO 2012) will be added as the second bullet in Table 8.3-3 (Clearing activities). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
709	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
710	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	Qualified person and Qualified Professional are not the same. Please update.	Qualified person will be replaced with Qualified Professional in Table 8.3-3 (Revegetation). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
710	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing

710	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	0			No	(Table 3.3-2, Revegetation) Add: comments from early works pertaining to 1) appropriate vegetation species and methods will be employed as instructed by the qualified professional; 2) measures may include consideration of planting of suitable tree species, live staking of willows, and planting of riparian shrub vegetation; 3) seeding can be accomplished by hand or mechanical methods, or by hydraulic application (Hydroseeding) and will be considered the most effective practice chosen by the Environmental Monitor for areas identified as being at risk for erosion or sedimentation. Hand seeding may be used in small areas that are difficult to reach with equipment, and hydroseeding may be used on steep slopes that are highly susceptible to erosion. Fertilizers will not be used in hydroseeding in riparian areas	Table 8.3-2: Mitigation Measures for Riparian Areas has been revised regarding Revegetation has been revised as follows: "Use native plants, seeds, or approved weed-free certified seed mixes, timing and scheduling appropriate for the ecosystems in accordance with the RCP. Appropriate vegetation species and methods will be employed as instructed by a qualified person. Measures may include consideration of planting of suitable tree species, live staking of willows, and planting of riparian shrub vegetation. Seeding may be accomplished by hand or mechanical methods, or by hydraulic application (hydroseeding). The Environmental Monitor will consider the most effective practice for areas identified as being at risk for erosion or sedimentation. Hand seeding may be used in small areas that are difficult to reach with equipment, and hydroseeding may be used on steep slopes that are highly susceptible to erosion. Fertilizers will not be used in hydroseeding in riparian areas."	No	LDN/UFN	ERM		Tonia	RT	N/A		
711	Appendix 9-F	Vegetation Management Plan 3.3 (Table	LDN_UFN		Jun 06, 2022	0			No	Add: from 3.2, commitment to monitor CDC status updates, monitoring of mitigation measures if implemented, conformance with herbicide application	A commitment to monitor federal and BC CDC status updates, conformance with herbicide application, implementation of mitigation measures is included in Plan Revision section.	No	LDN/UFN	ERM		Tonia	RT	N/A		
711	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	There is no mention in section 12 of conformance with herbicide application updates or implementation of mitigation measures.	Section 12 of the Vegetation Management Plan states: "The VMP is a living document and will be reviewed annually to assess its effectiveness and to ensure that it remains current with legislation and best management practices. The timing of plan updates will be informed by monitoring results and changes to regulations and best management practices. Federal species at risk and the BC CDC will be reviewed annually to check status updates to listed species and ecosystems at risk." Therefore, should legislated herbicide application updates be required or if mitigation/management measures are identified as not being effective, this will be reviewed and updated on an annual basis. As stated in Section 12: "Proposed revisions will be reviewed and discussed with the Blackwater Environmental Monitoring Committee and Aboriginal Groups, FLNRORD and EMLI prior to adopting and implementing the changes."	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
712	Appendix 9-F	Vegetation Management Plan 3.3 (Table	LDN_UFN		Jun 06, 2022	0			No	Clarify: Consider including this information in 3.2 and distinguish between provincial and federal ranking systems. As comment above, a commitment to monitor would be appropriate here.	See response to ID #34.	No	LDN/UFN	ERM		Tonia	RT	N/A		
712	Appendix 9-F	Vegetation Management Plan 3.3 (Table 8.3-2)	LDN_UFN		Jun 06, 2022	1	New		No	Not entirely certain what this comment is in relation to, however the same goes here as Round 1 comment for 34.	As stated in the response to comment #711 [Round 0 comment ID#34], BW Gold commits to review of both federal species at risk and the BC CDC on an annual basis. Section 8.2 of the Vegetation Management Plan the following statement also addresses the distinction between provincial and federal ranking systems: "In the event rare plants, new provincially or federally listed species or ecosystems at risk are identified, or changes to the listed status of known plants, communities, or ecosystems occur, the following mitigation measures will be implemented:"	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
713	Appendix 9-F	Vegetation Management Plan 4.4 (11)	LDN_UFN		Jun 06, 2022	0			No	(Table 4.4-1) Review provincial condition #3 for adaptive management requirements and amend table as needed - be specific. These requirements further inform your monitoring strategy and data collection methodologies throughout the implementation of the VMP. No mention of vegetation tissue analysis.	The VMP must meet the requirements of section 9.8 of the Joint Information Requirement for the Mines Act/Environmental Management Act permits application. This plan is not required by the EAC. Vegetation tissue analysis is outside the scope of the VMP. Vegetation and soil metal concentrations will be monitored as required by the Mines Act and Part 10.7.17 of the Health, Safety and Reclamation Code for Mines in British Columbia (EMLI 2021) to identify trends and mitigation (see RCP in Section 4.3 (Trace Element in Soils and Vegetation of the Application).	No	LDN/UFN	ERM		Tonia	RT	N/A		
713	Appendix 9-F	Vegetation Management Plan 4.4 (11)	LDN_UFN		Jun 06, 2022	1	New		No	Please reference relevant EAC management plans in the text or in a table. This will help provide a more complete picture of veg mgmt. and monitoring activities across the site.	Environmental Assessment Certificate Conditions and Decision Statement Conditions associated with the Vegetation Management Plan (VMP) are listed and described in Section 4.2 of the VMP.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
714	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	0			No	(Table 4.4-1) Add: consideration of when restoration activities are warranted based on level of exceedance (e.g., when would wetland restoration be required if the RMA was breached?)	Restoration activities would depend on the magnitude of the impact and the degree of intervention required to restore natural processes or conditions.	No	LDN/UFN	ERM		Tonia	RT	N/A		
714	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	1	New		No	Response does not address the comment requestion the addition to trigger action table regarding restoration in the event of a breach/	A breach of an RMA is considered in Table 11-1, third line. In the event of an RMA breach, a Level 2 Alert would be triggered ("clearing and work activities do not meet the approved work practices for the management zone"). The Level 2 Alert response to this would be to "implement progressive reclamation and/or offsetting as required".	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
714	Appendix 9-F	Vegetation Management Plan 4.4 (11)	LDN_UFN		Jul 27, 2022	2	Follow Up	Information requirement	No	It is unclear what defines a level 1 and level 2 alert response (specifically in line three) because the triggers are the same. For clarity, suggest providing additional information or a table with examples of what would constitute a level 1 or 2 response to a trigger	The difference between a Level 1 and Level 2 Alert for 'management area zones and mitigation followed' is that in the Level 2 trigger, clearing has occurred outside the approved work windows (Table 11-1 of the Vegetation Management Plan; the Level 1 trigger maintains clearing within the approved work windows). Clearing outside the work window (the Level 2 trigger) requires a higher level of action/response as outlined in the table.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; Aug. 2	Ready for Publishing
715	Appendix 9-F	Vegetation Management Plan 4.4 (11)	LDN_UFN		Jun 06, 2022	0			No	(Table 4.4-1, Timing) Clarify: As written, the clearing portion of the table is paradoxical. Maybe "Outside the least-risk timing window" is more accurate? It suggests that the EM is monitoring for unplanned clearing outside the appropriate timing windows. The adaptive management strategy should be overhauled to meet requirements before considering this point.	Section 9 notes that monitoring will be conducted when clearing and construction activities occur outside the appropriate timing window.	No	LDN/UFN	ERM		Tonia	RT	N/A		

715	Appendix 9-F	Vegetation Management Plan 4.4 (11)	LDN_UFN		Jun 06, 2022	1	New		No	Is the response in reference to table 9-1, vegetation clearing section? Otherwise I see no mention of this in section 9. Also, this table only mentions breeding birds and in-stream works…no mention of any other timing windows.	The correct section reference in response to the comment should have been Table 8.1-1 of the Vegetation Management Plan, where pre-clearing measures include "the timing of vegetation clearing and construction activities to occur outside of sensitive time periods (e.g., breeding birds, amphibians)"; "Coordinate in-water work within reduced risk work window (July 15 to August 31) in Region 7 - Omineca". The plan also refers to Table 3.3-1 in the Wildlife Mitigation and Monitoring Plan for wildlife sensitive time periods and guidelines for buffers.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
716	Appendix 9-F	Vegetation Management Plan 4.4 (11)	LDN_UFN		Jun 06, 2022	0			No	Add: What are your QA/QC procedures? Please include mentioned data sheet in the appendix. "[…] reviewed prior to finalization" of what? Who will perform the training?	Field datasheets will be developed and incorporated into a Standard Operating Procedure that will be in place prior to the commencement of construction. Section 8.5 has been revised as follows: "Quality assurance/quality control (QA/QC) procedures will be followed during surveys and monitoring. Qualified persons will conduct the surveys and will be provided with training on appropriate monitoring techniques to standardize field methods. Field data sheets or a digital survey form will be used to standardize data collection. Observations indicated in either field data sheets or digital survey forms will be reviewed at the end of day by the surveyor. All data will be transferred to a database and will be reviewed prior to analysis and reporting. Depending on the amount of data, a random, statistically representative sample of the data may be queried or the entire database may be queried for QA/QC."	No	LDN/UFN	ERM		Tonia	RT	N/A		
716	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	1	New		No	What is this in reference to? There is no section 9.5 or 8.5.	Section 9 of the Vegetation Management Plan provides the text referred to in Round 0 response to comment ID#716.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
717	Appendix 9-F	Vegetation Management Plan 5.1 (10.2)	LDN_UFN		Jun 06, 2022	0			No	Add: Describe reporting requirements, such as information/data collected, and include the monitoring field forms to be used in an appendix of this document. "Monitoring data will be stored for the life of mine." Please be more specific. Where, how, and who is responsible?	Reporting and Record Keeping are described in Section 10.1. Section 10.2 now reads: The EM is responsible for data management, reporting and records related to vegetation management. Monitoring data will be entered into an electronic database and have quality control checks completed upon receipt of results. Data will be entered into a standard format that allows for data reporting and analyses. Data and data comparisons will be stored in a single file format for each type of survey or monitoring activity. Monitoring data will be stored for the life of the mine and will be made available for review upon request." Monitoring field forms will be developed prior to commencing construction.	No	LDN/UFN	ERM		Tonia	RT	N/A		
717	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	1	New		No	This will be carried forward until such time as the Monitoring field forms have been developed and inserted as an appendix	BW Gold acknowledges the comment.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
717	Appendix 9-F	Vegetation Management Plan 5.1 (10.2)	LDN_UFN		Jan 02, 1900	2	Follow Up	Comment	No	Acknowledging the comment is not sufficient. We want a firm commitment from BW Gold to have ongoing consultation with LDN and UFN on development and approval of monitoring field forms	BW Gold commits to engaging in ongoing consultation with LDN and UFN on the development of monitoring field forms. BW Gold has an agreement which sets out requirements for engaging on regulatory permitting matters and is committed to following the agreement.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
718	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	0			No	Clarify: "Environmental incidents and non-compliance related to the VMP will be reported to the EM. All incidents and related actions will be recorded and maintained in an incident database." What types of incidents? E.g., incidental take, provincially reportable spill, timber trespass, HADD? Recorded on an Incident Report Form?	Incidental observations, including non-compliances, will be recorded using a standard field data sheet and submitted to the EM on a daily basis. The EM will follow up on incidental observation reports within one week.	No	LDN/UFN	ERM		Tonia	RT	N/A		
718	Appendix 9-F	Vegetation Management Plan 5.1 (10.2)	LDN_UFN		Jun 06, 2022	1	New		No	Response does not address the entire comment. Please add examples of non-compliance.	Section 10.1.1 of the Vegetation Management Plan will be updated as follows: "Incidental observations, including non-compliances, will be recorded using a standard field data sheet and submitted to the EM on a daily basis. Non-compliances could include (are not limited to) infringing on boundaries or RMAs, not conducting the required pre-clearing surveys, incidental take, spill within a vegetated area." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 14	Ready for Publishing
718	Appendix 9-F	Vegetation Management Plan 5.1 (10.2)	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
719	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	0			No	Clarify: Please reword the following sentence to be more clear - "Results and monitoring activities will be reported until further monitoring of and management is not required […]" How will this be determined? Refer to N/A comments below.	The sentence will be deleted in the updated vegetation management plan.	No	LDN/UFN	ERM		Tonia	RT	N/A		
719	Appendix 9-F	Vegetation Management Plan 5.1 (10.2)	LDN_UFN		Jun 06, 2022	1	New		No	What has replaced this sentence to get the information you were communicating across from the original?	Section 10.1.1 will be updated in the Vegetation Management Plan as follows: "Non-compliances could include (are not limited to) infringing on boundaries or RMAs, not conducting the required pre-clearing surveys, incidental take, spill within a vegetated area. Non-compliances along with proposed corrective actions and final resolutions will be tracked until such a time as considered closed." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
719	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
720	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	0			No	Clarify: Please provide specific details regarding the type of activities that will be monitored, how they will be monitored, data/observations you plan on collecting/recording, how you plan on collecting them, and how you plan to store monitoring data. A table showing monitoring frequency would be beneficial. These are basic monitoring requirements.	Table 9-1 identifies monitoring activities, method and timing. Record keeping and data storage is identified in Section 10.2.	No	LDN/UFN	ERM		Tonia	RT	N/A		

720	Appendix 9-F	Vegetation Management Plan 5.1 (10.2)	LDN_UFN		Jun 06, 2022	1	New		No	Section 10.2 is 2 sentences long. It requires more details as outlined in original comment. Please elaborate on the above mentioned items.	Section 9.0 and Table 9.1 of the Vegetation Management Plan (VMP) address all of the Comment #720 Round 0, requested clarifications regarding monitoring activities, method and timing. Table 9.1 includes information on types of activities that will be monitored, data/observations planned on being collected/recorded, and frequency. Section 9.0 of the VMP includes information on how monitoring will be completed, how data is collected, and how monitoring data will be stored. Standard operating procedures have been developed for field procedures for the collection of vegetation and soils for the purpose of metals analysis and provided in Appendix A of the VMP.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
721	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	0			No	Clarify: the project inherently causes changes to ecosystem function and loss of biodiversity. How will this be measured in a meaningful way?	Section 11 identifies monitoring objectives and methods, and adaptive management triggers.	No	LDN/UFN	ERM		Tonia	RT	N/A		
721	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	1	New		No	Response does not address comment. While table is good, it makes no mention of measurables. It's fine to say you will monitor, review and update plans etc... but how will you monitor, what parameters will be measured in order to ascertain weather of not actions, review or updates are required. More detail is required here.	Monitoring measurables (volume/presence etc...) are provided in Table 9-1 of the Vegetation Management Plan. If the request for clarification is in reference to post-closure reclamation planting, please refer to the Reclamation Closure Plan (Section 10) for details on post-closure monitoring and maintenance.	/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
721	Appendix 9-F	Vegetation Management Plan 6.1 (10)	LDN_UFN		Jul 27, 2022	2	Follow Up	Information requirement	No	Response does not address original comment. We are looking for measurable parameters in change in ecosystem function and loss of biodiversity. Comment also was not transferred over properly, this comment should include the following "is there baseline data". Please respond to that as well.	The Vegetation Management Plan details monitoring of parameters related to the objectives of the plan "to minimize impacts on native vegetation, sensitive areas (riparian, old growth forests), and plant species and ecosystems at risk and ensure the successful revegetation of disturbed areas to reduce soil erosion and the establishment of invasive plants." The reviewer is directed to the End Land Use Plan (ELUP) where the objective is to 'Assess the potential for end land use objective success based on the pre- and post-mine land and aquatic environment conditions'. An end land use objective for Blackwater Project is 'Self-sustaining vegetation that will progress to plant communities similar to pre disturbance ecosystems as supported by the results of the ecohydrological modelling'. Section 5.1.1.1 of the ELUP details the baseline or pre-mine land capability (i.e., ecosystem function and biodiversity). Section 5.1.5 of the ELUP provides a summary of the reclamation monitoring to assess the success of reclamation in reclaimed areas and compare the trajectory of reclaimed sites relative to baseline and reference conditions (methods will be further detailed in the Reclamation and Closure Plan).	/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; Aug. 11	Ready for Publishing
722	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	Clarify: How will your EM determine, in a measurable way, whether the site has been successfully revegetated in areas susceptible to erosion? Please include a section that discusses/summarizes ESC and revegetation efforts, provide references to the appropriate MPs.	SEPSCP includes monitoring for early signs of erosion and sediment transport processes (e.g., physical alteration of the surface) and feature (e.g., turbid water). Post-clearing mitigations related to revegetation and erosion in Table 8.1-1: "- Minimize soil degradation and erosion by leaving stumps and understory vegetation intact where possible and adhering to the SMP, SEPSCP and RCP. Cutting prescriptions for each site will consider Soil Conservation Planning and Practices in the Quesnel and Vanderhoof Forest Districts (FPB 2010).	No	LDN/UFN	ERM		Tonia	RT	N/A		
722	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	Similarly to comment 47,[Comment ID 720] I think the original comment is looking for monitoring and data collection post re-vegetation to show that a certain amount of bare ground has been successfully re-vegetated. It is not enough to plant or seed vegetation, you have to make sure it takes and fill plant/seed where it is less or unsuccessful.	Please refer to the Reclamation Closure Plan (Chapter 4) for details on revegetation requirements and monitoring commitments.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
722	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jul 27, 2022	2	Follow Up	Information requirement	No	Please add a reference (be specific) within the VMP to clarify and address the original comment regarding monitoring and measuring successful revegetation	The Vegetation Management Plan (VMP) details monitoring of parameters related to the objectives of the plan "to minimize impacts on native vegetation, sensitive areas (riparian, old growth forests), and plant species and ecosystems at risk and ensure the successful revegetation of disturbed areas to reduce soil erosion and the establishment of invasive plants." Table 9-1 of the VMP does indicate monitoring of 'Post-clearing revegetation' to document the total area revegetated, periodic inspectections of the revegetated areas to assess performance objectives, and evaluation of the success of the revegetation prescriptions in meeting the objectives and, if required, identification of additional mitigation activities. The reviewer is also directed to the End Land Use Plan (ELUP) where the objective is to 'Assess the potential for end land use objective success based on the pre- and post-mine land and aquatic environment conditions'. An end land use objective for the Blackwater Project is 'Self-sustaining vegetation that will progress to plant communities similar to pre disturbance ecosystems as supported by the results of the ecohydrological modelling'. Section 5.1.1.1 of the ELUP details the baseline or pre-mine land capability (i.e., ecosystem function and biodiversity). Section 5.1.5 of the ELUP provides a summary of the reclamation monitoring to assess the success of reclamation in reclaimed areas and compare the trajectory of reclaimed sites relative to baseline and reference conditions (methods will be further detailed in the Reclamation and Closure Plan). The ELUP outlines an adaptive management framework (Section 5.1.6) to address if revegetation success is not on the tractectory relative to baseline and reference conditions.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
723	Appendix 9-F	Vegetation Management Plan (Table 8.1-	LDN_UFN		Jun 06, 2022	0			No	Little mention of riparian area mitigating measures relating to riparian clearing, crossing structures, and associated erosion potential. Will these be included in a different plan?	Table 8.3-2 has been revised to include mitigations related to riparian and wetland areas.	No	LDN/UFN	ERM		Tonia	RT	N/A		
723	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		Yes	Please include more details on mitigation during bridge or culvert construction or any other time there may be encroachment on riparian areas	A bullet will be added to Table 8.1-1 (Clearing) to address encroachment on riparian areas: "Where encroachment into riparian areas cannot be avoided (bridge/culvert construction and maintenance), follow permit conditions and/or management plan requirements regarding the removal of riparian vegetation, limit equipment impact to vegetation through the use of swamp mats if possible, restore areas as soon as is practical and revegetate disturbed areas with native plants following disturbance." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
723	Appendix 9-F	Vegetation Management Plan (Table 8.1-	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing

724	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jun 06, 2022	0			No	How have effects to wildlife been captured? How will vegetation be managed to ensure wildlife is not attracted to the site and associated roadways, how will metal uptake be managed such that it minimizes risk to wildlife? See iRT Section 9.8.	The following as been included in Table 8.1-1: General Mitigation Measure: "Species that prevent erosion and are not wildlife attractants will be used to re-vegetate roadways to prevent the establishment of invasive plants in accordance with the IPMP. Wildlife attracting species include legumes (family Fabaceae), brome (Bromus sp.), alfalfa (Medicago sativa), annual rye (Lolium multiflorum), barley (Hordeum vulgare), timothy (Phleum pretense), alpine bluegrass (Poa Alpina), and American sloughgrass (Beckmannia syzigachne) (Matheus & Omtzigt 2013)." Vegetation tissue analysis is outside the scope of the VMP. Vegetation and soil metal concentrations will be monitored as required by the Mines Act and Part 10.7.17 of the Health, Safety and Reclamation Code for Mines in British Columbia (EMLI 2021) to identify trends and mitigation (see RCP in Section 4.3 (Trace Element in Soils and Vegetation of the Application). Condition 41 of the EAC requires the Holder to develop a CFMP, which includes sampling methods and locations for sampling contaminants of potential concern in vegetation and other media (Section 4.4 of the CFMP). The CFMP must be developed in consultation with the Indigenous groups, Ministry of Energy, Mines and Low Carbon Innovation, Ministry of Environment and Climate Change Strategy, and Northern Health and submitted to these parties and the Environmental Assessment Office a minimum of 60 days prior to the planned commencement of construction.	No	LDN/UFN	ERM		Tonia	RT	N/A		
724	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jun 06, 2022	1	New		No	According to the iRT and Guidance document, metal uptake is within the scope of the VMP so far as it should provide an SOP for addressing metal uptake. Section 9.8 reads, "Include SOPs for addressing, if applicable, riparian areas, old growth and mature forests, rare and at-risk species and ecosystems, metal uptake, large/coarse woody debris, and invasive plant species. If prudent, develop a separate invasive plant management plan to highlight the key considerations for early identification and effective management of invasive plants to facilitate successful site reclamation."	As stated in Section 9 of the Vegetation Management Plan (VMP): "Vegetation and soil metal concentrations will be monitored as required by the Mines Act and Part 10.7.17 of the Health, Safety and Reclamation Code for Mines in British Columbia (EMLI 2021) to identify trends and mitigation. Metal uptake monitoring is addressed in the Country Food Monitoring Program, which includes sampling methods and locations for sampling contaminants of potential concern in vegetation and other media (Section 4.4 of the CFMP)." However, to address the requirements of the Joint Application Information Requirements, standard operating procedures have been developed for field procedures for the collection of vegetation and soils for the purpose of metals analysis and provided in Appendix A of the VMP.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
724	Appendix 9-F	Vegetation Management Plan (Table 8.1-1)	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	Add reference to appropriate MP (and section) in the VMP to answer "how will metal uptake be managed such that is minimizes risk to wildlife" as per original comment	A reference will be added in the next version of the Vegetation Management Plan to refer to Section 6.2.5 of the Wildlife Management and Mitigation Plan (WMMP), which includes information about data collected under the Country Foods Monitoring Program (CFMP) that can be used to evaluate caribou (and ultimately other wildlife) health. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
725	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	1	New		No	Unable to resolve this screening requirement until SOPs are provided for review.	Draft SOPs were provided in Appendix A of the Vegetation Management Plan (Appendix 9-F) of the Application submitted in April 2022.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
726	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jun 06, 2022	1	New		No	SOP's have been received as part of CEMP submission (05/25/2022) review is in progress.	BW Gold acknowledges the comment and no response is required.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 14	Ready for Publishing
728	Appendix 9-F	Vegetation Management Plan Whole Document	LDN_UFN		Jun 06, 2022	1	New		No	While current provincial documents may still use the term "Aboriginal Groups" it is an outdated term that should no longer be used. Consider revising all documents for this and using either First Nations or Indigenous in its place.	BW Gold has been using the term Aboriginal Groups when referring to the 6 Nations prescribed in the EAC, and the term Indigenous Groups when referring to the 10 Nations prescribed in the Decision Statement (i.e.., these are defined terms in the documents). This is an important distinction, as not all management plan requirements apply to all Nations. That said, BW Gold will revise the use of the term Aboriginal Groups to Indigenous nations for all management plans. However, the use of Aboriginal Groups may still be used as a stated in the Environmental Assessment Conditions when making specific reference to EAC requirements.	/TD to revie	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
728	Appendix 9-F	Vegetation Management Plan Whole	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
729	Appendix 9-F	Vegetation Management Plan Section 2	LDN_UFN		Jun 06, 2022	1	New		No	Add (SOP) acronym in text after first mention of standard ops procedures.	The acronym will be defined at first mention. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
729	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
730	Appendix 9-F	Vegetation Management Plan Section 3	LDN_UFN		Jun 06, 2022	1	New		No	Paragraph 4, line 3: not sure if I missed it previously in the document but what is a "PM" if not already mentioned please spell out prior to use of acronym	The PM refers to Project Manager in this case and will be defined at first mention. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
730	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
732	Appendix 9-F	Vegetation Management Plan Section 3	LDN_UFN		Jun 06, 2022	1	New		No	Paragraph 7: refences all the different committee members and associated ministries or FN. All associated acronyms are entered with the exception of (FLNRORD). Why? Please add.	The acronym for FLNRORD will be added following first use in Paragraph 7. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
732	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing

733	Appendix 9-F	Vegetation Management Plan Section 4.1	LDN_UFN		Jun 06, 2022	1	New		No	Add : Wildfire Act regulations which are referred to later in document. Consider adding any and all other regulations from the acts mentioned in this section that are also relevant to the VMP	All regulations listed in Section 14 References will be added to section 4.1. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
733	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
734	Appendix 9-F	Vegetation Management Section 7	LDN_UFN		Jun 06, 2022	1	New		No	Paragraph 2: no Latin for lodgepole pine (Pinus contorta). Please add	The Latin term for lodgepole pine (Pinus contorta) will be added to Section 7. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
734	Appendix 9-F	Vegetation Management Section	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
735	Appendix 9-F	Vegetation Management Plan Table 7-1	LDN_UFN		Jun 06, 2022	1	New		No	Table has column of map codes yet there is no map associated with this section which contain these map codes. What map is this referring to and why is it not contained or referenced in the document?	These codes are in reference to the reference document (Appendix 5.1.3.3A Vegetation 2011 – 2013 Baseline Report in the Blackwater Gold Project Application for an Environmental Assessment Certificate / Environmental Impact Statement Assessment of Potential Environmental Effects). Clarification will be made in a future iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
736	Appendix 9-F	Vegetation Management Plan Section 7	LDN_UFN		Jun 06, 2022	1	New		No	Were areas of known species at risk or sightings of these plants mapped during the EA process? Will any of these species be disturbed during Project activities? Please address.	The 2011-2013 Vegetation Baseline Studies (Appendix 2-Q) documented and mapped known species at risk within the mine site. As stated in Section 8.2 of the Vegetation Management Plan (VMP), pre-clearing surveys of areas to be disturbed will be completed to flag, map, and record (photograph) listed species and will be provided to the Environmental Manager. Mitigations will be implemented as listed in Section 8.2 of the VMP.	T/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
736	Appendix 9-F	Vegetation Management Plan Section 7	LDN_UFN		Jul 27, 2022	2	Follow Up	Clarification	No	Section 8.2 does not state "pre-clearing surveys of areas to be disturbed will be completed to flag, map, and record (photograph) listed species and will be provided to the Environmental Manager.". Table 8.1.1 addresses some of the response, however it does not mention 'listed species', only 'environmentally sensitive features'	Listed species will be specified (with riparian areas) in the following pre-clearing survey text in Table 8.1: "Conduct pre-clearing surveys to identify environmentally sensitive features (e.g., riparian areas, listed species) that may interact with clearing and construction activities, taking into account riparian setbacks in Table 8.3-1. Map and flag sensitive features and identify management actions (e.g., restrictions, no heavy machinery, no refueling, etc..)." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
737	Appendix 9-F	Vegetation Management Plan Section 7.3	LDN_UFN		Jun 06, 2022	1	New		No	There are known wetlands in and around the site. Can we add this as a feature to Riparian areas map.	Known wetlands in and around the site will be added to the Riparian areas (Figure 7-3 of the Vegetation Management Plan). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
737	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
738	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jun 06, 2022	1	New		No	General, point 3: sentence is confusing, please revise and explain what is meant by reducing dimensions of clearing, regardless of size...makes no sense.	The following text will be revised in Table 8.1-1 of the Vegetation Management Plan (General) bullet 4 to put the emphasis on reducing the clearing size (with no conditions): "Minimize all clearing dimensions." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
738	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
739	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jun 06, 2022	1	New		No	Pre-clearing, point 4: "Conduct windthrow...all new openings..." suggest changing wording to, "within blocks greater than..." Otherwise it doesn't make sense as at this stage there is no opening, it's only proposed as a layed out block. The purpose of these assessments, among other things, is to indicate whether or not the shape, size and orientation etc... of the proposed opening might be susceptible to windthrow, therefore you should add something to that effect. "Should assessments suggest a high or very high potential for windthrow, block layout will be revised"	Table 8.1-1 (Windthrow) of the Vegetation Management Plan will be revised as follows: "Conduct windthrow hazard assessments within blocks greater than 1 ha. Should assessments suggest a high or very high potential for windthrow, block layout will be revised. Monitor annually for windthrow hazard." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
739	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing

740	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jun 06, 2022	1	New		No	Assuming that since Artemis has received its permit to cut, that terrain stability assessments have already been carried out and therefore are not required in this table. Please confirm.	Terrain stability assessments to determine if it was safe to log or not were not required by the province in the License to Cut permit application.	T/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 19	Ready for Publishing
741	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jun 06, 2022	1	New		No	Pre-clearing, point 4: "Conduct windthrow...all new openings..." suggest changing wording to, "within blocks greater than..." Otherwise it doesn't make sense as at this stage there is no opening, it's only proposed as a layed out block.	Table 8.1-1 (Pre-Clearing) bullet 4, of the Vegetation Management Plan will be revised as follows: "Conduct windthrow hazard assessments within blocks greater than 1 ha." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
741	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
742	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jun 06, 2022	1	New		No	Herbicide Use: Please add that whenever possible and if manual treatment is best suited to, it will be favored over chemical treatments	Table 8.1-1 (Herbicide) of the Vegetation Management Plan will be revised as follows: "See Appendix E of the IPMP for information on herbicide use, application and other treatment options (including mechanical and biological control). Where herbicide use is determined to be the most effective treatment option, use spot applications and avoid broad spraying of herbicides, especially adjacent to listed plant communities or plants and riparian zones (refer to IPMP for details on setbacks)." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
742	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
743	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jun 06, 2022	1	New		No	Paragraph 4: when you say you will establish buffers, are you suggesting they will be mapped or flagged or both. Please elaborate.	See also response to Comment #699. The following text will be provided in Table 8.1-1 of the Vegetation Management Plan: "Boundary layout will be completed prior to clearing and clearly delineated with flagging. RMAs and setback buffers will also be clearly identified and established prior to clearing. All clearing boundaries and setback buffers will be walked and reviewed with clearing crews prior to clearing." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
743	Appendix 9-F	Vegetation Management Plan Table 8.1-1	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
744	Appendix 9-F	Vegetation Management Plan Table 8.3-2	LDN_UFN		Jun 06, 2022	1	New		No	What is the source information of this table? It is not in the same as wetland classification RMA boundaries as per Riparian management area guidebook. Please clarify what the source is and why it is different.	Table 8.3-2 (Wetland Riparian Management Areas) of the Vegetation Management Plan was adapted from that of the Riparian Management Area Guidebook. It was simplified to include only small and large wetlands, and wetland complexes. However, with the completion of the 2022 Wetland Baseline data collection program, BW Gold will provide the complete list of wetland Riparian Management Area classes and boundaries (i.e.., Riparian Class W1, W2, W4, W4, and W5) in Table 8.3-2 as indicated in the Riparian Management Area Guidebook. The Riparian Management standard operating procedure will also be updated to include all wetland classes in addition to the key to riparian classification of wetlands in Figure 12 of the Riparian Management Area Guidebook. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 21	Ready for Publishing
744	Appendix 9-F	Vegetation Management Plan Table 8.3-2	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
745	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jun 06, 2022	1	New		No	Buffers, point 1 and 2: be clear on what this means. Are buffer and setbacks flagged in the field? What does it mean to "establish" an RMA?	Table 8.3-3 (Buffers) Bullet point 1 and 2 of the Vegetation Management Plan will be combined and will be updated to read: "Clearly define (with flagging tape/sediment fence/snow fence) RMAs to reduce disturbance to waterbodies located within the mine site, excluding the Project and construction footprint, in accordance with the Riparian Area Management SOP." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
745	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing

746	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jun 06, 2022	1	New		No	Buffers: Add: no cutting for the sake of profits from clearing process will be undertaken.	BW Gold acknowledges the request, however, this statement will not be add to the Vegetation Management Plan. BW Gold is a subsidiary of Artemis Gold Inc, a publicly-traded mining company in the business of mineral extraction. There is no part of our business that is driven by or focused on logging for profit.	/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
746	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
747	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jun 06, 2022	1	New		No	Clearing activities, point 3: lead with, "Only when required for the purpose of crossing install etc..., fall trees away from…."	Table 3.3-3 (Clearing Activities) Bullet point three of the Vegetation Management Plan will be revised as follows: "Only when required for the purpose of crossing install etc..., fall trees away from stream banks and aquatic areas to minimize disturbance to riparian areas." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
747	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
748	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jun 06, 2022	1	New		No	Herbicides, point 1: change wording. "avoided" suggests there are time where is may happen. If a PFZ is established then there should never be use within.	Table 3.3-3 (Herbicides) Bullet point one of the Vegetation Management Plan will be revised as follows: "To protect fish and wildlife, a pesticide-free zone will be established in riparian areas in accordance with Table 8.2-3 of the IPMP." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
748	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
749	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jun 06, 2022	1	New		No	Revegetation, point 2: should this decision not be conducted by a QP and not a qualified person??	Qualified person will be replaced with Qualified Professional in Table 8.3-3 (Revegetation) in a subsequent version of the document. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 16	Ready for Publishing
749	Appendix 9-F	Vegetation Management Plan Table 8.3-3	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
750	Appendix 9-F	Vegetation Management Plan Section 9	LDN_UFN		Jun 06, 2022	1	New		No	Paragraph 4: please describe or provide reference to "standardized field methods"	Section 9 of the Vegetation Management Plan text will be updated in the next plan iteration to read: "Qualified Environmental Monitors will conduct the surveys and will be provided with training on appropriate monitoring techniques and expectations to standardize field methods (i.e.., field techniques are completed in consistent manner among sampling campaigns)." All monitoring will be performed by appropriately qualified Environmental Monitors, under the direction of the BW Gold Environmental Manager. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
750	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
751	Appendix 9-F	Vegetation Management Plan Table 9-1	LDN_UFN		Jun 06, 2022	1	New		No	Post-clearing windthrow monitoring: add identification of additional mitigation activities	Table 11-1 (Trigger Action Response Plan) will be updated to include 'identification of additional mitigation activities' under the Level 2 Alert for 'Windthrow'. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 20	Ready for Publishing
751	Appendix 9-F	Vegetation Management Plan	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward until we see updated revisions of management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								GM; Aug 15	Ready for Publishing
752	Appendix 9-F	SOPs	LDN_UFN		Jun 06, 2022	1	New		No	Not reviewed as part of this document as newer versions were sent to KES in May. Please revise and attach new SOPs to VMP document	Draft SOPs were provided in Appendix A of the Vegetation Management Plan (Appendix 9-F) of the Application submitted in April 2022.	/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 16	Ready for Publishing
753	Chapter 4: Section 4.1	Wildlife Habitat	LDN_UFN		Jun 06, 2022	0			No	Objective 1. given that this area is caribou habitat and Artemis is required to replace this habitat, does opening this area up to the public make sense? It was raised as a concern throughout the EA that increased pressure on the land within the traditional territories of LDN and UFN by visitors was undesirable and conditions were drafted to limit that (e.g., not allowing workers to use the area for recreation).	Section 4.1 has been revised as follows: A mix of sustainable conditions supporting wildlife habitat (Table 4.1-1), traditional and current use by Indigenous peoples. The end land use objectives do not require new access from trails or roads, consequently, use of the closed mine site will not include adding or maintaining trails for recreation purposes.	/TD to revie	LDN/UFN	ERM		Rolf/Greg/H annah	RT	22-Jun-22		
753	Chapter 4: Section 4.1	Wildlife Habitat	LDN_UFN		Jun 06, 2022	1	New		No	"""A mix of sustainable conditions supporting wildlife habitat (Table 4.1-1), traditional and current use by Indigenous peoples."" Worded a bit confusing. Should read as: ""A mix of sustainable conditions supporting wildlife habitat (Table 4.1-1) and traditional and current use by Indigenous peoples.""""	BW Gold will make the suggested revision in a subsequent version of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg/H annah	RT	Ready for Submission	RT; jun 17	Ready for Publishing
754	Chapter 4: Section 4.1	Objectives	LDN_UFN		Jun 06, 2022	0			No	What is the definition of "similar"?	Having resemblance or likeness. It is difficult to provide a concise definition at this point in the document, but there is a lot of discussion throughout Section 4.1 as to what "similar" means in the context of the RCP.	No	LDN/UFN	ERM		Rolf/Greg/H annah	RT	N/A		

754	Chapter 4: Section 4.1	Objectives	LDN_UFN		Jun 06, 2022	1	New		No	Perhaps a different word should be used to avoid any misinterpretation on desired outcomes, or at least a reference within this statement to the types of ecosystems that are being sought.	We're open to alternative wording if you have specific recommendations, but believe this is an appropriate word to indicate that pre-mining ecosystems are the end-land-use target, while recognizing that the post-mining landscape will not be identical. As noted in the previous response, there is more detailed discussion throughout Section 4.1 as to what "similar" means in the context of the RCP. We could add a footnote directing the reader to Section 4.1.2.3, which defines targets in more detail.	T/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
755	Chapter 4: Table 4.1-1	Soil	LDN_UFN		Jun 06, 2022	0			No	Is it realistic to plan for the establishment of different ecosystems across an elevational gradient on waste stockpiles? How big will these be (elevation, slope)?	The variation in ecosystems is in alignment with ecohydrological modeling results. Glaciofluvial surface soil will be applied to the uppermost portions of the waste stockpiles, which supports the xeric-subxeric site series. The mixed-mineral (predominantly morainal) surface soil will be applied to slopes and is projected to form a submesic-mesic site series that is expected to revegetate faster, reducing erosion risk (and also create ecosystem heterogeneity). These subzone variant/site series projections account for slope, aspect, slope position and location (including elevation).	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
755	Chapter 4: Table 4.1-1	Soil	LDN_UFN		Jun 06, 2022	1	New		No	This doesn't exactly address the question being asked. While the relationship to SMRs is understood (although on a very small scale), how will this stockpile (stockpiles) account for elevational changes across the mine site? How tall are these stockpiles? What are the elevations of the different treatments? This information should be available from engineered drawings. Overall, this is still a simplistic attempt at understanding ecosystems across the reclaimed mine site - not all high elevation areas will be xeric, surely, and not all mid-elevation areas will be mesic.	Elevation ranges (from Appendix 3-C): - Upper Waste Stockpile 1410-1470 m (60 m) - Lower Waste Stockpile 1490-1620 m (130 m) Glaciofluvial soil is only prescribed for the top, flat surfaces (see Figure 8.1-1 of the Soil Management Plan). The modelled xeric ecosystems on dump tops and wetter ecosystems on dump slopes are not based on elevation, nor on a simplistic assumption that all high-elevation areas will be xeric and all mid-elevation areas mesic. Modelled post-closure ecosystems are based on placed materials and slope/aspect, with glaciofluvial materials supporting establishment of xeric-subxeric ecosystems and mixed-mineral soil materials supporting establishment of wetter (submesic and mesic) ecosystems. See Fig. 4.2-1 for correspondence of ecosystems with cover materials.	T/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
756	Chapter 4: Table 4.1-1 / Section 4.2.6.2 Permanent Sample Plots	Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	Why is no ESSFmvp planned for? This is the ecosystem in which whitebark pine grows.	Most of the ESSFmvp that is lost during mine development overlaps the open pit mine, which will not be reclaimed, and other structures that will be required during closure. This is the reason that of the 27.6 ha present prior to construction in the ESSFmvp, 0.1 ha will be reclaimed during closure. The rest of the reclaimed areas occurs at elevations below the ESSFmvp boundary.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
756	Chapter 4: Table 4.1-1 / Section 4.2.6.2 Permanent Sample Plots	Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	In understanding the ESSFmvp zone is not being reclaimed, there are plans to establish permanent sample plots for whitebark pine in areas it has not grown in pre-mining. Please include within this statement, "Monitoring will continue post-closure until monitoring criteria have been achieved and agreed-upon reclamation objectives met" who will be consulted and agreeing on the reclamation objectives for these plots (i.e.., inclusion of Indigenous communities in the final say).	The statement "Monitoring will continue post-closure until monitoring criteria have been achieved and agreed-upon reclamation objectives met." is included in Section 4.2.6.2 (Permanent Sample Plots). Regarding input of Indigenous Groups on reclamation objectives, Section 4.2.6 (Reclamation Monitoring) states: "Details of the monitoring plan, including criteria and indicators of reclamation success and associated measures and thresholds will be developed as more detailed reclamation planning and implementation is conducted, and based on ongoing collaboration with Aboriginal Groups."	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
757	Chapter 4: Table Figure 4.1-1	Reclamation	LDN_UFN		Jun 06, 2022	0			No	Is there any outstanding exploration reclamation that needs to be added to this (e.g., north of Dam D)?	Please refer to comment response to comment #2.	No	LDN/UFN	BWG			TD	N/A	TD, Aug 16	Ready for Publishing
757	Chapter 4: Table Figure 4.1-1	Reclamation	LDN_UFN		Jun 06, 2022	1	New		No	Question not adequately answered.	Exploration reclamation liability is fully bonded for by way of previous permitting, and is subject to the reclamation prescriptions agreed upon during that permitting. LDN and UFN were consulted on previous exploration permitting and reclamation plans at Blackwater.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
758	Chapter 4: Table 4.1-2	Wetlands Caribou	LDN_UFN		Jun 06, 2022	0			No	Why are wetter ecosystems in both dominant BEC zones not reflected in the table for reclamation priorities? These ecosystems are important for caribou (as well as many other species) and must be part of the reclamation landscape. The mine site runs a water surplus, it would be good to direct some of this to establishing wetter ecosystems within or nearby the project footprint. LDN/UFN would like to understand why there are no opportunities to increase depressional features, etc.. within the post-closure landscape.	Wetland area is anticipated to be reduced on the post-closure landscape due to the changes in topography and substrate. Post-closure hydrologic conditions will not be conducive to replacement or maintenance of wet, organic-rich soils (and associated shallow groundwater inputs), which are required for wetland formation. Wetland reclamation will be conducted as mine and reclamation plans evolve—and opportunistically—where possible, and an offset plan is in place to compensate for losses.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
758	Chapter 4: Table 4.1-2	Wetlands Caribou	LDN_UFN		Jun 06, 2022	1	New		No	This does not answer why opportunities are not being sought for more depressional features. Reclamation should be re-evaluated and revised based on the ongoing feedback and changes to the Wetland Management Plan.	As noted in Section 4.2.7.3 (Wetlands Management and Offsetting Plan), BW Gold is applying the environmental mitigation hierarchy of avoidance, minimization, restoration, and offsetting to wetland management. Following avoidance and minimization, restoration will be the focus. Specific areas are not currently delineated, as the hydrologic conditions necessary for wetland formation are specific and will need to be identified as the project proceeds. BW Gold agrees that reclamation of wetlands will be re-evaluated and revised based on the ongoing feedback on and changes to the Wetland Management and Offsetting Plan.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
759	Chapter 4: Page 4-8	TSS	LDN_UFN		Jun 06, 2022	0			No	Why are there elevated TSS in fall? Is this a year-over-year trend?	There are elevated TSS in fall due to lower flows during that time of year, but with isolated higher intensity rain events causing runoff. Yes, this is a year-over-year trend.	No	LDN/UFN	BWG		Georges	TD	Ready for Submission	GM; june 14	Ready for Publishing
759	Chapter 4: Page 4-9	TSS	LDN_UFN		Jun 06, 2022	1	New		No	Please explain this reasoning within the plan, or a reference to where an explanation can be found.	BW Gold is not updating Chapter 4 as part of review of the joint application, however the reviewer's comment will be considered in future iterations of the reclamation and closure plan.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
760	Chapter 4: Section 4.1.3.1	Soil Eco Model	LDN_UFN		Jun 06, 2022	0			No	Typical soils of the SBSmc3 are luvisols why does this differ within the project footprint?	Reclamation site series—IEG has put a lot of effort into understanding the edaphic conditions that will support vegetation communities (i.e., analysis of 1,000s of BEC-database plots from across the province and a resultant model that produces a fit between SMR and site series that is as good as the guidebook keys https://open.library.ubc.ca/soa/clRcle/collections/59367/items/1.0402425?o=0.). A version of this model is available at qea.iegsoil.com. The SBSmc3-02 site series occurs in the driest conditions in the variant. On natural sites these conditions may be observed on shallow soils (typically luviols) over bedrock on mid to upper slopes, but we believe that it can occur in other xeric conditions on a primary-successional landscape.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
760	Chapter 4: Section 4.1.3.1	Soil Eco Model	LDN_UFN		Jun 06, 2022	1	New		No	Confirm these ecosystems with these SMRs are proposed to be established through reclamation trials	Yes, these site series will be included in the research plan (see Table 4.2-9). As stated in Section 4.2.5.1 (Vegetation and Cover Trials): "Vegetation trials are proposed for four areas that encompass a range of conditions projected to be present on the post-closure landscape (Figure 4.2-6), including both BEC subzone variants (ESSFmv1 and SBSmc3). All site series projected to be present on the post-closure ecosystem are included in vegetation trials except SBSmc3-01, 04, 05 and 06, however they will only be present on surface soil stockpile footprints, which will likely require less intensive intervention to reclaim."	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 14-Jun	Ready for Publishing
761	Chapter 4: Section 4.1.3.1	Wetlands	LDN_UFN		Jun 06, 2022	0			No	Are wetland compensation areas at equal elevation to those lost through the project?	The Wetland Management and Offsetting Plan addresses compensation for wetlands lost in the Project footprint. This compensation plan focuses on the Matthews Creek offset site, which is at relatively low elevation, similar to the majority of wetland ecosystems mapped on the mine site.	No	LDN/UFN	ERM		Greg	RT	N/A		
761	Chapter 4: Section 4.1.3.1	Wetlands	LDN_UFN		Jun 06, 2022	1	New		No	Can plans that describe offsetting in more detail (i.e.., wetlands, caribou, fish, etc...) be referenced throughout to make it clear that more research and planning has gone in than what is provided in this plan?	BW Gold will make the suggested revision to include more references to the plans that include research and planning. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Shannon	RT	Ready for Submission	RT; June 17	Ready for Publishing
762	Chapter 4: Section 4.1.3.1	Revegetation Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	During early works we discussed how planting will be determined (species, density) and we were referred to stocking standards for the BEC zones. SBSmc3 stocking standards are not in the 2019 update, what will be planted here? Whitebark pine is not a recommended species for stocking standards in the other SBSmc variants	Whitebark pine has been removed from the planting list (Table 4.2-6, Table 4.2-7) and lodgepole pine and hybrid spruce planting density will be increased. It is proposed that research trials in the SBSmc3 incorporate whitebark pine to assess viability for planting on xeric and subxeric sites.	No	LDN/UFN	ERM		Greg	RT	N/A		

762	Chapter 4: Section 4.1.3.1	Revegetation Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	What contingency plan is in place if these research trials fail to produce viable planting of whitebark pine? Will offsetting in an area outside of BW Gold permit occur?	An offset outside of the BW Gold permit area was discussed with ECCC in January, and it was indicated that on-site mitigation, per the federal condition, was the preferred approach. Should the first round of research trials fail to produce viable plantings of whitebark pine, BW Gold will follow the adaptive management approach and update the methods of seed collection, propagation and testing to produce viable plantings. BW Gold has begun monitoring the cone crop in 2022 to provide sufficient time to gather further seeds if the first batch of seeds fails. At this time, an off-site offsetting is not planned.	/TD to revie	LDN/UFN	ERM		Shannon	RT	Ready for Submission	RT; June 17	Ready for Publishing
762	Chapter 4: Section 4.1.3.1	Revegetation Whitebark Pine	LDN_UFN		Jul 27, 2022	2	New	Information Requirement	No	Just to expand on the above and below questions, as the best area for planting whitebark (Pit area) is not being restored do you have a contingency if whitebark fails to grow at lower elevations that are being explored through trials? Having this contingency explicitly mentioned should be part of you adaptive management strategy as there is a lot of uncertainty regarding whitebark growing at the lower elevations and the novel post-closure conditions, and there are also climate change effects that may come more into play 25 + years from now. Please write this continency plan for whitebark restoration, would like to see a memo.	A memo is not provided for this response because the requested details for whitebark pine restoration contingency are provided in the Whitebark Pine Management Plan (WPMP; May 2022) that was developed in accordance with the federal Decision Statement 8.20. Table 11-1 of the WPMP provides actions/contingencies in response to observations made (e.g., health of seedlings) during the whitebark pine restoration trials outlined in Section 4.2.5.2 of the Reclamation Closure Plan (and detailed in Section 9 of the WPMP) . Climate change is also specifically considered in Section 9.3.3 of the WPMP with the proposed reclamation planting trials that aim to assess conditions that will reduce the effects of climate change on whitebark pine recovery. LDN and UFN were previously provided with a draft version of the plan for comment and BW Gold is in the process of updating the plan to reflect feedback received.	/TD to revie	LDN/UFN	ERM		Lis/Shannon	RT		rt; Aug. 15	Ready for Publishing
763	Chapter 4: Section 4.1.3.3	Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	So all whitebark pine ecosystems are lost but losses are offset by planting whitebark pine in potentially unsuitable locations?	Whitebark pine will be used to reclaim exploration roads in the ESSFmvp and will be planted in the ESSFmv1 on reclaimed mine footprints (Please see Table 4.2-7). Additional reclamation trials will be conducted to assess the potential use of Pa on xeric and subxeric edaphic conditions on the reclaimed areas in the ESSFmv1.	No	LDN/UFN	ERM		Greg	RT	N/A		
763	Chapter 4: Section 4.1.3.3	Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	Same question as above: What contingency plan is in place if these research trials fail to produce viable planting of whitebark pine? Will offsetting in an area outside of BW Gold permit occur?	Please see the response to comment 762.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
764	Chapter 4: Section 4.1.3.3	Objectives	LDN_UFN		Jun 06, 2022	0			No	"There is potential for decreased hunting and trapping success as a result of localized changes to wildlife availability" diverting the blame elsewhere is not a fair assessment of impacts related to the project. We aren't expecting Artemis to replenish wildlife pollutions, but recognizing that changes to ecosystems and the resultant effect on wildlife should not be overshadowed by this statement.	The RCP acknowledges that the habitat capability on the mine footprint will likely be different following closure. Section 4.1.3.3 includes the statement that: "Current land use for traditional purposes (e.g., hunting and gathering) is predicted to change in the Post-closure phase when compared to the baseline due to changes in post-mine ecosystems (Table 4.1-5) and land capability."	No	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	N/A		
764	Chapter 4: Section 4.1.3.3	Objectives	LDN_UFN		Jun 06, 2022	1	New		No	LDN and UFN do not accept this overarching statement that does not appear to be backed by science (ERM, 2017) reference is insufficient	In a future iteration, the RCP will be updated to improve the discussion on habitat capability for wildlife, following comments from UFN and LDN. Differences in land capability will be discussed in the document and will be highlighted in the next version of the document. The RCP is not being updated at this time. However, to list changes in capability for each wildlife and fish species would require habitat suitability modeling for the mine site in post-closure, which is beyond the scope of the RCP.	No	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	RT; June 17	Ready for Publishing
764	Chapter 4: Section 4.1.3.3	Objectives	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we can review a updated RCP with the revisions made. Further we want a commitment from BW Gold to have ongoing consultation on this topic.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans. BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement and as required by relevant regulatory processes.								TD; Aug 16	Ready for Publishing
765	Chapter 4 Page 4-9	Wetlands	LDN_UFN		Jun 06, 2022	0			No	Please say how this will change capability in terms of fish and wildlife habitat?	In a future iteration, the RCP will be updated to improve the discussion on habitat capability for wildlife following comments from UFN and LDN. Differences in land capability will be discussed in the document and will be highlighted in the next version of the document. However, to list changes in capability for each wildlife and fish species would require habitat suitability modeling for the mine site in post-closure which is beyond the scope of the RCP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	N/A		
765	Appendix 9-F	Vegetation Management Whole Document	LDN_UFN		Jun 06, 2022	1	New		No	Can the reviewer explain/confirm for me why every reference in this spreadsheet is incorrect? Was there a previous version of VMP that had a table 4.4-1 or 8.3-2 that was not what it is currently? It had made review very difficult since these screening comments were made by another.	Correct, the numbering has been updated since the last iteration and tables have been added following review and updates to the Construction Environmental Management Plan (CEMP), in which the Vegetation Management Plan was referred to and attached. Incorrect references/cross-references will be revised in an updated plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RTI June 14	Ready for Publishing
765	Chapter 4 Page 4-9	Wetlands	LDN_UFN		Jun 06, 2022	1	New		No	Potential impacts on caribou are mentioned to be contained in the Caribou Monitoring and Mitigation Plan, what about potential impacts for fish, or other species? A statement that post-closure habitat suitability modeling will be conducted to assess landscape capability upon closure should be included.	BW Gold will add a statement that habitat suitability mapping for Closure will be completed upon mine Closure. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	ERM		Ben	RT	Ready for Submission	RT; June 29	Ready for Publishing
765	Chapter 4 Page 4-9	Wetlands	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we can see an updated RCP plan with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
766	Chapter 4 Page 4-10	Wetlands	LDN_UFN		Jun 06, 2022	0			No	Of the remaining area, 50 ha of the SBSmc3 in the postmineplan is reclaimed to the drier site series (SBSmc-02 and 03) that provide caribou (Rangifer tarandus) habitat. While this is caribou habitat please acknowledge that the wetland habitats that will be lost are also caribou habitat so this is not an addition of caribou but a replacement / change of caribou habitat type.	The section has been revised to include: The modeling and physical parameters of the closed mine site indicate that the site will be slightly drier than the pre-mine environment. Given that the site will be drier overall, re-creation of wetlands may not be possible in the post-closure environment. With a drier overall site, the objective is to make the best quality caribou habitat possible given this drier environment. Wetlands do function as caribou habitat and some will be lost during construction of the mine. Offsetting for these lost wetlands is discussed in the Wetlands Plan. The text in the RCP will be updated to make it clear that the objective is to make the best possible caribou habitat given the constraints of the post-closure landscape.	/TD to revie	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	N/A		
766	Chapter 4 Page 4-10	Wetlands	LDN_UFN		Jun 06, 2022	1	New		No	Odd wording, suggestion for clarity: *"The modelling and physical parameters of the closed mine site indicate that the site will be slightly drier than the pre-mine environment. Given that the site will be drier overall, the re-creation of wetlands may not be possible in the post-closure environment. Wetlands function as caribou habitats, and some will be lost during the mine construction. The Wetlands Management and Offsetting Plan discuss offsetting for these lost wetlands. Consequently, the objective is to make the best possible quality caribou habitat given the constraints of this drier environment of the post-closure landscape."*	BW Gold will make the suggested revision to include more references to research and planning. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	RT; June 17	Ready for Publishing

766	Chapter 4 Page 4-10	Wetlands	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we can see an updated RCP plan with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
767	Chapter 4 Page 4-10	Wetlands	LDN_UFN		Jun 06, 2022	0			No	The previous wetland, bog and fen habitats in the mine site are also important summer caribou habitat can you justify restoring the site as a drier habitat for caribou when the site changes may result in species that were present previously on site not have their habitat restored.	Refer to response above to comment 25. [The section has been revised to include: The modeling and physical parameters of the closed mine site indicate that the site will be slightly drier than the pre-mine environment. Given that the site will be drier overall, re-creation of wetlands may not be possible in the post-closure environment. With a drier overall site, the objective is to make the best quality caribou habitat possible given this drier environment.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
767	Chapter 4 Page 4-10	Wetlands	LDN_UFN		Jun 06, 2022	1	New		No	The Wetlands Management and Offsetting Plan is currently under significant review. Include a statement regarding the ongoing changes to the WMOP will be monitoring and adapted to this Plan as it evolves.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
767	Chapter 4 Page 4-10	Wetlands	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we can see an updated RCP plan with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
768	Chapter 4 Page 4-10	Caribou	LDN_UFN		Jun 06, 2022	0			No	The increase in the drier ESSFmv1-02 and -03 site series on the post-closure landscape relative to predisturbance conditions (1,053 ha versus 454 ha) represents an overall increase in potential caribou habitat that compensates for the decreases of 253 ha (51 ha versus 287 ha) and 28 ha (0 ha versus 28 ha) in the SBSmc3 and ESSFmvp, respectively: While the habitat type you mention is caribou habitat, the wetland and other habitat types that are being replaced are also important seasonal caribou habitats so you cannot say there will be an increase in caribou habitat, All of these planted habitats also have a risk of failure and of being lower quality than natural habitats so please refrain from indicating the habitat will be better for any species as this is not likely.	The EAC Application evaluated the loss of caribou habitat in the mine footprint. The text in the RCP will be updated to make it clear that the objective is to make the best possible caribou habitat given the constraints of the post-closure landscape.	T/TD to revie	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	RT: June 24	Ready for Publishing
768	Chapter 4 Page 4-10	Caribou	LDN_UFN		Jun 06, 2022	1	New		No	"The increase in the drier ESSFmv1-02 and -03 site series on the post-closure landscape relative to predisturbance conditions (1,053 ha versus 454 ha) represents an overall increase in potential caribou habitat that compensates for the decreases of 253 ha (51 ha versus 287 ha) and 28 ha (0 ha versus 28 ha) in the SBSmc3 and ESSFmvp, respectively:" Although the addition that quality carbious habitat is good, the wording still suggests that the loss of SBSmc3 and ESSFmvp is ok because ESSFmv1 - 02 and -03 will increase. As previously mentioned, wetland zones and other habitats are essential for reasons that ESSFmv1 - 02 and -03 cannot provide. Therefore, stating that the increase will "compensate" for the decrease is not a valid statement. Please rephase this to make clear that overall caribou habitat will not be "increasing" because of this.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	Yes	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	RT: June 24	Ready for Publishing
768	Chapter 4 Page 4-10	Caribou	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we can see an updated RCP plan with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
769	Chapter 4 Page 4-11; Table 4.1-4	ESSFmvp Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	The ESSFmvp units are important and rare ecosystems with regionally important species such as whitebark pine. It was our understanding that these would be restored but here you say you are changing the sites nutrient status and suggesting these won't / can't be restored? How is the loss of whitebark pine being mitigated?	Most of the ESSFmvp that is lost during mine development overlaps the open pit mine, which will not be reclaimed, and other structures that will be required during closure. This is the reason that of the 27.6 ha present prior to construction in the ESSFmvp, 0.1 ha will be reclaimed during closure. The rest of the reclaimed areas occurs at elevations below the ESSFmvp boundary. Whitebark pine will be used to reclaim exploration roads in the ESSFmvp and will be planted in the ESSFmv1 on reclaimed mine footprints (Please see Table 4.2-7).	Yes	LDN/UFN	ERM		Rolf	AT	N/A		
769	Chapter 4 Page 4-11; Table 4.1-4	ESSFmvp Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	Will areas that are required during closure be appropriately restored once all reclamation activities are complete? Please incorporate response into Plan.	BW Gold will incorporate any areas that are required during closure into the updated plan.	Yes	LDN/UFN	ERM		Tonia	AT	Ready for Submission	AT, June 25	Ready for Publishing
770	Chapter 4 Table 4.1-4	Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	Please explain table 4.1-4 better as it suggests that no whitebark pine will exist post closure but reading 4.1.4 Habitat for Focal Reclamation Species - you are saying whitebark will be planted alongside other species. These sections are confusing and will bring criticism unless you quantify what will be restored.	Table 4.1-5 (previously Table 4.1-4) includes the site unit names which are not inclusive of all species that may occur on these sites. Section 4.2 describes the species that will be used during reclamation. Text was added to section 4.1.3 to provide clarification: Table 4.1-5 shows the changes in abundance between the pre-mine and post-closure ecosystems. The names in Table 4.1-5 do not reflect the full suite of plant species that will be used to reclaim these ecosystems, for example the ESSFmv1 02 (Lodgepole pine - Huckleberry – Cladonia) will include planting of whitebark pine. Whitebark pine will be used to reclaim exploration roads in the ESSFmvp and will be planted in the ESSFmv1 on reclaimed mine footprints (Please see Table 4.2-7).	No	LDN/UFN	ERM	IEG	Rolf/Katie	RT	N/A		
770	Chapter 4 Table 4.1-4	Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	Table 4.1-5: RCP Ecosystem Summary for Vegetation and Wildlife is still confusing. It suggests that no vegetation or wildlife will be established in the in post-closure ESSFmvp. Is there a way to revise the table to make it clear what type of ecosystem this will be converted to?	The table reflects the projected post-closure ecosystems. As stated in Section 4.1.2.3 Summary of Changes to Landscape Capability: "In the post-mine landscape, all but 0.1 ha of the ESSFmvp will be exempt from reclamation as part of roads, the pit footprint, or water-diversion structures. The small parkland area (0.1 ha) that will be reclaimed is projected to support the FM site unit (Subalpine fir – Heather parkland), which was not present on the reclaimed footprint prior to mining and is not suited for whitebark pine growth."	Yes	LDN/UFN	ERM	IEG	Rolf/Katie	RT	Ready for Submission	RT: June 26	Ready for Publishing

771	Chapter 4 Table 4.1-4	Information requirements	LDN_UFN		Jun 06, 2022	0			No	Based on the overarching principle of equivalent capability - EA information requirements Based on these requirements the table suggests that the post mine ecosystem is not very equivalent to the pre-mine ecosystem can you please justify this change	The following has been added to Section 4.1.2 - Pre- and Post-Mine Land Capability Assessment: We cannot entirely replicate the pre-development landscape and its ecosystems and do not claim otherwise - as a result of the substantive landscape-scale changes involved in the mining process (e.g., loss of higher-elevation areas to retained infrastructure, construction of ecosystems on a well-drained waste-rock substrate). However, significant effort has gone into iterative attempts to reduce differences between pre-development and post-mining conditions, and we will actively look for opportunities to continue this reduction throughout the life of mine through reclamation research trials and other initiatives (e.g., constructing small wetland areas and appropriate revegetation of opportunistic wetlands). Despite differences between pre-development and post-closure conditions, it is anticipated that ecosystems established on the post-mining landscape will provide value for intended land uses.	T/TD to revie	LDN/UFN	ERM		Rolf/Mark	RT	N/A		
771	Chapter 4 Table 4.1-4	Information requirements	LDN_UFN		Jun 06, 2022	1	New		No	This was not added to Section 4.1.2	Thank you for noting this. While BW Gold acknowledges that we have previously indicated that this line would be added to Section 4.1.2, the Application is not being edited further at this time. This comment will be noted, and this edit will be incorporated into a future version of the Application.	T/TD to revie	LDN/UFN	ERM		Rolf/Mark	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
771	Chapter 4 Table 4.1-4	Information requirements	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	It is our understanding that chapter 4 will become the reclamation and closure plan, therefore it will be revised in the future-Artemis communicated this to MMO. We want a commitment for this revision to be made in RCP.	BW Gold commits to revision of the Reclamation and Closure Plan (as a stand-alone document) to include the information provided in response to the Round 0 comment. This document had already been provided to LDN and UFN through a separate regulatory process through the EAC as the End Land Use Plan. Whenever the RCP is updated (on 5 year intervals through the required 5 year plan updated) it will be submitted as a standalone plan.	T/TD to revie	LDN/UFN	ERM		Rolf/Mark	RT	Ready for Submission	TD, Aug 15	Ready for Publishing
772	Chapter 4 Page 4-12, Table 4.1-4	Wetlands	LDN_UFN		Jun 06, 2022	0			No	The new permanent water features are no substitute for the wetland areas that existed on the mine footprint. These are important caribou and moose habitats as well as numerous wetland species. Why are these wetland habitats not being restored given there is an excess of water sources onsite?	Wetland area is anticipated to be reduced on the post-closure landscape due to the changes in topography and substrate. Post-closure hydrologic conditions will not be conducive to replacement or maintenance of wet, organic-rich soils (and associated shallow groundwater inputs), which are required for wetland formation. Wetland reclamation will be conducted as mine and reclamation plans evolve—and opportunistically—where possible, and an offset plan has been developed to compensate for losses.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission		Ready for Publishing
772	Chapter 4 Page 4-12, Table 4.1-4	Wetlands	LDN_UFN		Jun 06, 2022	1	New		No	Focus should be centered around contouring the land for the re-creation of wetlands. As per previous comment, statement should be included to say that plans will be adapted as the Wetlands Management and Offsetting Plan evolves.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
772	Chapter 4 Page 4-12, Table 4.1-4	Wetlands	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we see the reclamation and closure plan that has this revision.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
773	Chapter 4 Table 4.1-5	Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	Whitebark pine growing in ecosystems not suitable to its establishment - SBS may be too low for the species	Whitebark pine has been removed from the planting list (Table 4.2-6, Table 4.2-7) and lodgepole pine and hybrid spruce planting density will be increased. It is proposed that research trials in the SBSmc3 incorporate whitebark pine to assess viability for planting on xeric and subxeric sites.	No	LDN/UFN	ERM	IEG	Shannon	TD	Ready for BWG Review		
773	Chapter 4 Table 4.1-5	Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	Same question as above: What contingency plan is in place if these research trials fail to produce viable planting of whitebark pine? Will offsetting in an area outside of BW Gold permit occur?	Whitebark pine will be planted during reclamation on sites where reclamation cover depths and materials have been specifically designed to create xeric to submesic soil moisture regimes (02 and 03 site series in the ESSFmv1; please see Table 4.2-7). Whitebark pine will also be used to reclaim exploration roads in the ESSFmvp. Additional reclamation research trials will be conducted during the Operation Phase to evaluate establishment success of whitebark pine on xeric to submesic edaphic conditions on the reclaimed areas in the ESSFmv1. Should the initial reclamation research trials fail to establish whitebark pine, Blackwater gold will follow the adaptive management approach and update the methods of seed collection, propagation, and testing to produce viable plantings. Blackwater has begun monitoring the cone crop in 2022 to provide sufficient time to gather further seeds if the first batch of seeds fails. At this time an off-site offsetting is not planned.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
774	Chapter 4 Page 4-25	Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	If climate predictions suggest whitebark pine habitat conditions will be lost it seems sensible to suggest potential planting / assisted colonisation of whitebark at higher elevations adjacent to the pit extent to offset this potential loss.	Whitebark pine will be planted on reclaimed exploration roads in the ESSFmvp. This will include areas where whitebark pine are not currently established.	No	LDN/UFN	ERM		Greg	TD	N/A		
774	Chapter 4 Page 4-25	Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	This still seems to be at a much lower elevation than the original habitat. Has BW Gold explored opportunities for offsetting at high elevation plots to help counteract climate change impacts?	Whitebark pine seedlings will be planted below, at and above their current elevational limit on Mount Davidson to determine utility of local assisted migration along an elevational gradient. Sites will not only be selected based on elevation, but will test establishment success on the range of existing ecosystems at multiple elevations (Section 9.2.2).	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
775	Chapter 4 Page 4-28	Wetlands	LDN_UFN		Jun 06, 2022	0			No	Assessment, there is expected to be a loss of wetter ecosystems that rely on groundwater inputs, Can you explain why the groundwater inputs onsite will not be there following closure? I think some justification of why a dryer site is being reclaimed is needed, saying that caribou prefer these dryer conditions is not correct, wetlands are commonly used by caribou to feed and supplement their diet with high protein sedges. Maintaining habitat diversity also promotes species diversity and resilience. If it is just much more challenging to restore the wetlands then this needs to be explained.	Wetland area is anticipated to be reduced on the post-closure landscape due to the changes in topography and substrate. Post-closure hydrologic conditions will not be conducive to replacement or maintenance of wet, organic-rich soils (and associated shallow groundwater inputs), which are required for wetland formation. Wetland reclamation will be conducted as mine and reclamation plans evolve—and opportunistically—where possible, and an offset plan is in place to compensate for losses. Our initial model runs showed loss of drier and wetter ecosystems, so we worked to increase representation of post-closure site series where achievable with the post-mine topography and substrates. While opportunities for re-creating wet site series were limited, revisions were made (including segregation and targeted application of coarse glaciofluvial soil) to minimize losses of drier site series. We did not intend to convey a focus primarily on creating only drier site series, this was not the intent. Revisions have been made to the text to reflect this.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
775	Chapter 4 Page 4-28	Wetlands	LDN_UFN		Jun 06, 2022	1	New		No	Response does not adequately address the question, "why the groundwater inputs onsite will not be there following closure?" It is understood that currently modelling shows the unlikely replacement of wetlands, but are changes in topography and substrate that better re-create wetland areas not being looked into? The phrasing below does not explain why upland ecosystems will be prioritized other than that wetter ecosystems will be lost. As discussed in Section 4.1.2, Pre- and Post-mine Land Capability Assessment, there is expected to be a loss of wetter ecosystems that rely on groundwater inputs. Therefore, the focus of reclamation designs has been to replace upland ecosystems in proportions similar to pre-mining conditions.	Reclaimed landforms are often not analogous to natural soil systems, particularly the lack of impeding soil horizons or bedrock to force downslope conveyance of water within rooting zones. In other words, groundwater inputs on site will not be accessible to vegetation on many of the landforms (e.g., waste stockpiles) due to the properties of mine-waste materials (fast draining, coarse textured) underlying the soil covers. Given these conditions, the QEA model does not include input of subsurface flow and seepage water. Thus, the model results represent a conservative projection that considers only meteoric water inputs, although the model does include potential groundwater input for toe and depression slope positions. Select disturbances on sites where limited disturbances to soil occur (i.e.., only surface-level disturbance), may have the hydraulic conditions appropriate for seepage/groundwater inputs. In line with ongoing re-assessment of the potential to reclaim wetlands and wetter site series described in the response to comment 758, the potential to reclaim wetter site series will be continually evaluated through the mine life, based on site-specific conditions.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
776	Chapter 4 Page 4-42	Pond	LDN_UFN		Jun 06, 2022	0			No	Is the pond safe for water birds which may use the pit lake. Likewise in the page below are the TSF ponds suitable for use by wildlife or will these be covered to limit wildlife access.	Some of the ponds will require treatment through post-closure. The WMMP includes provisions for management of the TSF ponds should water quality not meet wildlife guidelines, including waterbirds.	No	LDN/UFN	ERM		Rolf	RT	N/A		Ready for Publishing

776	Appendix 9-F	Vegetation Management Plan Table 3-1	LDN_UFN		Jun 06, 2022	1	New		No	Same comment as above. Acronym MP is used in table and later in text but never spelled out, nor is it in the acronyms and abbreviations section.	The acronym MPs refers to Management Plans. An acronym check will be done of this section (and the document) in the next update. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Toni a	RT	Ready for Submission	RT; June 19	Ready for Publishing
776	Chapter 4 Page 4-42	Pond	LDN_UFN		Jun 06, 2022	1	New		No	Please include the test/treatment process or reference within the Plan where the information can be found.	Section 7.2.10 of the Mine Site Water and Discharge Monitoring and Management Plan (MSDP) describes the treatment facilities that will be available through the Post-Closure phase. Section 7.3.1 of the MSDP describes monitoring to be completed at the ponds including the sample testing methods. Adaptive management to verify implementation of water management activities at the mine site is provided in Section 11 of the MSDP. Deterrence of migratory birds and toads from Project ponds are provided in Section 3.10.2 of the Wildlife	/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	RT; June 28	Ready for Publishing
777	Chapter 4 Page 4-40	Metals	LDN_UFN		Jun 06, 2022	0			No	Why use CCME parkland - consideration of provincial wildlands thresholds?	CCME parkland thresholds for soil and Contaminated Sites Regulation (BC CSR) soil standards (Schedule 3.1 of B.C. Reg. 375/96) have been included in Section 4.2.1.5	No	LDN/UFN	IEG	ERM		TD	N/A	TD, Jun 27	Ready for Publishing
777	Chapter 4 Page 4-40	Metals	LDN_UFN		Jun 06, 2022	1	New		No	Update footnote 19 to match	Acknowledged. Will be addressed in the next revision of the document. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	IEG	ERM		TD	Ready for Submission	RT; June 18	Ready for Publishing
777	Chapter 4 Page 4-40	Metals	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Unresolved until we see the reclamation and closure plan that has this revision.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
778	Chapter 4 Section 4.2.1.6	Soil	LDN_UFN		Jun 06, 2022	0			No	Inconsistent reference to where OVB is stored - sometimes listed as both upper and lower waste stockpiles, here just lower waste stockpile	BW Gold was unable to find any instances where it's stated that OVB will come from the Upper Waste Stockpile. BW Gold will revise any errors if found.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
778	Chapter 4 Section 4.2.1.6	Soil	LDN_UFN		Jun 06, 2022	1	New		No	Section 4.7.3.1 Design and Construction - "While the Upper Waste Stockpile will contain NAG waste rock, the outer surface will consist predominantly of OVB34 as this OVB is a component of the rooting zone modelled for the planning of soil covers and vegetation prescriptions." Section 4.7.3.3. Post-closure Water Management - "The post-closure water management plan for the Upper Waste Stockpile involves decommissioning of collection ditches around the stockpile and grading the surface of the stockpile to connect surface drainages with those of the downstream terrain." Table 4.2-1: Data Sources of Mine Waste Materials Used for Ecohydrological Modelling - "OVB = Lower and Upper Waste stockpiles" Section 4.2.1.3 Reclamation-material Supply - "OVB for use in reclamation will come from the Lower Waste Stockpile."	BW Gold considers "storage" to refer to locations where OVB is stored temporarily, and then moved to final landforms during reclamation for use in reclamation covers. "Storage" is not referring to the run-of-mine waste material that is placed in stockpiles over time. In the case of the Upper Waste Stockpile, OVB will be placed there (particularly in the upper lifts to act as a growing medium), but material is not being stored in the Upper Waste Stockpile to then be moved to other reclamation areas (in line with Section 4.7.3.1, Design and Construction, and Table 4.2-1, Data Sources of Mine Waste Materials Used for Ecohydrological Modeling). All OVB that will be moved to other reclamation areas and applied as cover material will come from the Lower Waste Stockpile (in line with Section 4.2.1.3, Reclamation-Material Supply).	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
779	Chapter 4 Section 4.2.1.6	Soil	LDN_UFN		Jun 06, 2022	0			No	Update frequency for monitoring stockpiles based on SMP discussion	The RCP has been updated to reflect revisions to the SMP, based on the comments received.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
779	Chapter 4 Section 4.2.1.6	Soil	LDN_UFN		Jun 06, 2022	1	New		No	No changes made	This comment is acknowledged and will be addressed in the next revision of the document. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
779	Chapter 4 Section 4.2.1.6	Soil	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. Unresolved until we see the updated plan with revisions made.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
780	Chapter 4 Table 4.2-6	Whitebark Pine	LDN_UFN		Jun 06, 2022	0			No	Concerns around planting WBP at such low elevations and mid-slope positions	Whitebark pine has been removed from the planting list (Table 4.2-6, Table 4.2-7), and lodgepole pine and hybrid spruce planting density will be increased. It is proposed that research trials in the SBSmc3 incorporate whitebark pine to assess viability for planting on xeric and subxeric sites.	No	LDN/UFN	IEG	ERM	Shannon	TD	Ready for Submission	RT: June 24	Ready for Publishing
780	Chapter 4 Table 4.2-6	Whitebark Pine	LDN_UFN		Jun 06, 2022	1	New		No	Same question as above: What contingency plan is in place if these research trials fail to produce viable planting of whitebark pine? Will offsetting in an area outside of BW Gold permit occur?	The current plan is to collect and propagate seeds for testing to determine if they rust-resistant, the so-called "plus" trees. If the first batch of seeds do not produce plus trees, the first contingency is to try a second batch of seedlings from different trees. BW Gold has begun seed collection studies in 2022 to maximize the number of iterations of seed collection and seedling testing possible during the operations phase of the Project. Offsetting would only be considered if multiple rounds contingency planning, collecting, propagating and testing seedlings was conducted.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
780	Chapter 4 Table 4.2-6	Whitebark Pine	LDN_UFN		Jul 27, 2022	2	Follow Up	Information Requirement	No	Your answer to the last question (780) regarding a contingency plan should be put into the document as an adaptive management framework, while there are many uncertainties regarding restoration the success of whitebark currently seems more uncertain than most other activities. As this is a threatened species we would like to see a short plan in case things do fail, including your above step but also potential steps once all the other contingency measures have been exhausted, this could simply be a renegotiation of whitebark mitigation with the relevant authorities due to failed seedlings in the available habitats. Address in a memo please.	BW Gold appreciates the comment and will update the adaptive management framework for the Whitebark Pine management plan in the next iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; Aug. 11	Ready for Publishing
781	Chapter 4 Table 4.2-6	Revegetation	LDN_UFN		Jun 06, 2022	0			No	Why is there no proposed planting of spruce? Concerns have been raised about the impacts of lodgepole pine plantations that do not serve wildlife or First Nations, and are not representative of the pre-mining landscape	Please refer to Table 4.2-7, which includes spruce on mesic and moister sites in the SBSmc3.	No	LDN/UFN	IEG	ERM	Shannon	TD	Ready for Submission	TD, June 22	Ready for Publishing
781	Chapter 4 Table 4.2-6	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	In understanding that whitebark pine is being planted in ESSFmv1/03 for trials, why is Engelmann spruce not part of the tree species listed as a late-successional species?	Engelmann spruce will be included as a late-successional species for the ESSFmv1/03 trials. Note that mention of whitebark pine in the research section (Section 4.2.6, Vegetation and Cover Trials) is due to a it being a key species of concern; detailed vegetation prescriptions for research trials are not presented and will be developed prior to implementation but will test the species listed in Table 4.2-7.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 23	Ready for Publishing
782	Chapter 4 Page 4-50	Research	LDN_UFN		Jun 06, 2022	0			No	Given the very limited areas that will be available for progressive reclamation, and the late stage in which they occur (e.g., Y18) we request additional trials be established around the mine site that capture the different BEC zones that occur on the mine site currently	BW Gold will review and identify additional opportunities for research trials that represent predicted post-mine site conditions in the two BGC units on the mine site. Refer to *'Table 4.2.8 - Uncertainties and Approaches for Addressing'* for a current summary of planned reclamation trials. Section 4.13 also includes a summary of inputs to the plan that may result in additional trials being identified as the RCP is updated.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	TD, June 22	Ready for Publishing

782	Chapter 4 Page 4-50	Research	LDN_UFN		Jun 06, 2022	1	New		No	Changes to proposed trials are not obvious to the reviewer	Additional research areas are now included, as described in Section 4.2.5.1 (Vegetation and Cover Trials) and summarized in Table 4.2-9 (Revegetation and Cover Research Trial Site Characteristics). As stated in the text, "Vegetation trials are proposed for four areas that encompass a range of conditions projected to be present on the post-closure landscape (Figure 4.2-6), including both BEC subzone variants (ESSFmv1 and SBSmc3). All site series projected to be present on the post-closure ecosystem are included in vegetation trials except SBSmc3-01, 04, 05 and 06, however they will only be present on surface soil stockpile footprints, which will likely require less intensive intervention to reclaim."	T/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
783	Chapter 4 Page 4-50	Revegetation	LDN_UFN		Jun 06, 2022	0			No	Sheep fescue is exotic - do not use, there are great native grasses that can be used instead	Thank you for your comment. Species removed.	No	LDN/UFN	IEG	ERM	Shannon	TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
783	Chapter 4 Page 4-50	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	What was chosen in replacement?	The text in Section 4.2.3 was updated to read: "TSF dams will be reclaimed at closure with a mix of native grass, forb, and shrub species. (Footnote- Composition of seed mixes may be revised in consultation with local Indigenous communities, and erosion control and wildlife habitat professionals.)"	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 22	Ready for Publishing
784	Chapter 4 Page 4-50	Revegetation	LDN_UFN		Jun 06, 2022	0			No	Sitka alder prefers mesic and wetter SMRs, are these expected on the TSF dams? There are other direr alders that would be better suited to these locations	Green alder has been included in Table 4.2-6.	T/TD to revie	LDN/UFN	IEG	ERM	Shannon	TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
784	Chapter 4 Page 4-50	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	Was not added.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
784	Chapter 4 Page 4-50	Revegetation	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. Unresolved until we see the updated reclamation and closure plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
785	Chapter 4 Page 4-56	Soil	LDN_UFN		Jun 06, 2022	0			No	Do you have plans for mycorrhizal and ectomycorrhizal fungi inoculation, is there capacity to do this? Mycorrhiza are known to increase survivorship and succession rates that you are seeking.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
785	Chapter 4 Page 4-56	Soil	LDN_UFN		Jun 06, 2022	1	New		No	This presents a research opportunity for BW Gold, if successful would positively influence future industry reclamation. Trials should not be disregarded as a reclamation approach.	Acknowledged for future consideration.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
785	Chapter 4 Page 4-56	Soil	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	Suggested revision has not been made. Unresolved until we see an updated RCP. When will this research opportunity be considered? "future" is not specific. Would like to see a discussion on this in the updated RCP .	BW Gold appreciates the comment, however the application is not being updated. BW Gold agrees that mycorrhizal innoculations can provide value to plant establishment, however, effects of inoculation are often context dependent. Literature on this topic generally shows inoculations to be primarily of value in low-quality soils that have a negligible presence of soil microbes (e.g., tailings, overburden). Conversely, materials like the salvaged surface soil that BW Gold intends to place in reclamation areas may contain residual mycorrhizal propagules and are also a more appropriate substrate for establishment of naturally dispersing microbes. Thus, establishment of native early successional mycorrhiza may be sufficient to support establishment of planted and naturally ingressing early successional vegetation (which typically have finer, more acquisitive roots for enhanced nutrient uptake and are less mycorrhizal dependent). Mycorrhizal inoculations will certainly be considered as an option if challenges in plant establishment are encountered during the research trials and progressive reclamation.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, Aug 4	Ready for Publishing
785	Chapter 4 Page 4-56	Soil	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	A revised version or memo should be provided regarding commitment to using mycorrhizal inoculation as a contingency plan should the salvaged surface soil not provide adequate microbes. This will ensure that there is a follow through plan if there are management changes in the future.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	IEG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
786	Chapter 4 Page 4-74	Caribou	LDN_UFN		Jun 06, 2022	0			No	In addition, there is low evidence of use by caribou historically (when caribou numbers were high) and currently, there is low potential for future use even without the Project. As your evidence is based on a very limited amount of data (Data with large bias towards the protected area) it is important that you tone down how negligible the loss of habitat for caribou is. In particular due to the high cumulative effects in the soundings the value of the habitat taken by the mine (high elevation, mature forest, whitebark pine and subalpine habitats) is greatly increased, while the protected areas are relatively undisturbed the mine has taken some of the last good caribou habitat from the area. This habitat could have been used as a bases for reconnecting the itcha caribou and tweedsmuir populations through the Fauni range. Indeed there is traditional knowledge showing connectivity through the mine site itself. You should remove these assertions as they are opinion drawing a lot of opposition.	The conclusion that the mine site area has been rarely used over the last 30 years is well-founded based on over 30 years of satellite collared data. These collars, installed and maintained by provincial biologists, are the standard methods for determining herd range and usage areas. The EAC, IR response (ERM 2018), and CMMP all acknowledge that while Mt. Davidson is outside of the current herd range in most years, that TK indicates that it was used in the past and that it is currently sometimes used by caribou today (from TK and caribou sign observed during baseline and follow-up field studies). Acknowledging this, Artemis is planning an offset for the area of caribou habitat lost on the mine site. However, the description of caribou habitat usage, background and justification for offsetting belong in the CMMP document and will be removed from the R&C Plan, which will reference that an offset is occurring.	No	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	N/A		
786	Chapter 4 Page 4-74	Caribou	LDN_UFN		Jun 06, 2022	1	New		No	"In addition, there is low evidence of use of the mine site by caribou historically (when caribou numbers were high) and currently, there is low potential for future use even without the Project." Please rephrase this sentence as it disregards TK as evidence.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
786	Chapter 4 Page 4-74	Caribou	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	IIn addition, there is low evidence of use by caribou historically (when caribou numbers were high) and currently, there is low potential for future use even without the Project. If the whole herd was GPS collared then what you are saying would be true but as only 30-40 caribou are collared (and less in the past) the data obviously do not represent the whole herd, so a relevant question here is 'what are the other 120-150 non-collared caribou from the tweedsmuir herd doing' it is not reasonable to assume they are following the GPS collared caribou' movements. Traditional knowledge, your own recent aerial surveys and recent sign surveys have confirmed caribou occupy Mount Davidson and corridors connecting to the fauni range it is important not to ignore valid data sources just because a we have GPS collar data.	Thank you for your comment. The CMMP has included reference to TK, statements on caribou habitat use made by LDN and UFN, habitat corridor mapping conducted by Keefer Environmental on behalf of LDN and UFN, as well as collar data.	No	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
786	Chapter 4 Page 4-74	Caribou	LDN_UFN		Sep 01, 2022	3	Follow Up	Comment	No	Have not seen any evidence of a memo or revisions in Ch 4 to suggest wording has been altered as to not disregard TK.	BW Gold has not altered any wording in Ch4 to disregard, or infer disregard of reliance on TK to inform reclamation and closure planning. Indeed, with direct reference to the CMMP, Ch 4, Section 4.2.7.1 - Caribou Offsetting Plan, places a high reliance on the CMMP and its collaborative development with Indigenous people, including the TK content, to guide the implementation of components of the CMMP through the RCP.		LDN/UFN	ERM		Greg/Hannah		Ready for Submission	RT; sept 15	Ready for Publishing

786	Chapter 4 Page 4-74	Caribou	LDN_UFN (Emma Cooke)		Oct 06, 2022	4	Follow Up	Comment	No	"BW Gold concluded there would be a residual effect of habitat loss and alteration for caribou, but that this effect would be not significant (negligible) for the Tweedsmuir caribou herd. The contribution of the Project to cumulative effects on winter habitat for caribou is assessed as not significant (negligible)." The last reviewer's comment is stating that a revision **needs** to be made to the wording as to not disregard TK. Although Section 4.2.7.1 references the CMMP, it still does not contain any mention or emphasis on Traditional Knowledge of caribou use around Mount Davidson. It only mentions the collar data as information used to come to the conclusion of being a "negligible" effect of habitat loss and alteration for caribou. This section needs to include mention of all sources of information, including aerial surveys, recent sign surveys, and Traditional Knowledge.	BW Gold understands the importance of Traditional Knowledge in evaluating effects on wildlife and takes its inclusion in the Project management plans serious. Section 4.2.7.1 of the Application references the Caribou Mitigation and Monitoring Plan (CMMP). The CMMP has been reviewed and approved and is the de facto source for describing effects of the project on caribou. The CMMP provides background from multiple information sources including Traditional Knowledge from the UFN and LDN, collar data, aerial survey, snow track surveys and incidental observations during other wildlife studies on-site. The CMMP also uses Resource Selection Function modeling conducted by consultants to the UFN and LDN that made extensive use of TK. Finally, the offsetting plan in the CMMP is based on locations provided by UFN and LDN through their habitat modeling and based on TK of historic movement corridors for caribou in the Project area. The CMMP states: The Project is on the eastern edge of the Tweedsmuir Local Population Unit (LPU) of southern mountain caribou (Rangifer tarandus caribou); with approximately half of the mine site falling inside the LPU. The mine site is within the historic range of the Tweedsmuir caribou based on Traditional Knowledge from UFN and LDN and includes areas mapped as winter caribou habitat (Figure 1.1-1). The mine site is outside of the annual range (1980-2020) used by collared female caribou, but is still used intermittently by caribou based on aerial surveys, snow track surveys and incidental observation. The construction of the Project will result in the removal and disturbance of three types of Type 1 Matrix habitat (high elevation, low elevation and general) and potential disturbance by noise of High Elevation Winter Range habitat (suitable habitat, but outside of the multi-year range of the herd).		LDN/UFN	ERM		Greg/Hannah		21-Oct-22		
787	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	0			No	SBSmc3-02 occurs on shallow soils over bedrock (mid- to upper-slope or level) and is dominated by juniper - neither of these attributes of this ecosystem are represented in the data in the row	The SBSmc3-02 occurs on sites with a xeric SMR. It may be true that it is primarily observed in non-mine areas on shallow soils over bedrock and on mid to upper slopes, but we believe we will create "atypical" xeric conditions on the mine landscape, due to the combination of substrates and cover materials. Additional context is provided in the response to comment 17. Juniper has been added.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 23	Ready for Publishing
787	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	Confirm these ecosystems with these SMRs are proposed to be established through reclamation trials	Yes, xeric SMRs (SBSmc3 and ESSFmv1-02) are included in the research trials at the following areas: Existing Camp, Lower Waste Stockpile, and FWR. Additional detail on these trials is provided in Section 4.2.5.1 (Vegetation and Cover Trials).	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
788	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	0			No	SBSmc3-03 occurs on upper slope to crest or level, and has abundant kinnikinnick - neither of these attributes of this ecosystem are represented in the data in the row	See response to comment #76.	No	LDN/UFN	IEG	ERM		TD	N/A	TD, Jun 27	Ready for Publishing
788	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	Kinnikinnick should be added	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
788	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	Unresolved until we see the updated RCP with the revision made.	Please refer to response to comment ID# 771.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	TD, Aug 15	Ready for Publishing
789	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	0			No	ESSFmv1-01 should have white spruce, white-flowered rhododendron (quintessential ESSF), sitka alder prefers mesic and wetter SMRs - there are other drier alders that would be better suited to these locations, twinflower is a shrub (not sure how you've organized this - so is kinnikinnick, but by TEM rules it would also be in the herb layer)	Table 4.2-7: Vegetation Prescriptions for Projected Post-closure Ecosystems has been revised to include species suggestions from the LDN/UFN as well as incorporating species identified in the Attachment: Table 2 RCP Ecosystem Summary Table Veg Wildlife.xlsx included in the November 17, 2021 Memo (0575928-0014).	/TD to revie	LDN/UFN	IEG	ERM	Shannon	TD	N/A	TD, Jun 27	Ready for Publishing

789	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	White-flowered rhododendron not added.	Please see response to 790 re: white-flowered rhododendron.	/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
790	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	0			No	ESSFmv1-03 generally forms on an upper slope position - should have white spruce, white-flowered rhododendron, same comment re: sitka alder, unlikely to support common juniper	Sitka alder has been replaced with green alder. White spruce has been added. Common juniper has been removed but may be reconsidered during closure. White-flowered rhododendron is an ericaceous species that prefers acidic soils, mor or moder humus forms, and generally occurs in later successional forests. It is reported that it requires a fungal symbiont that does not survive transplantation. It was considered and rejected because of potential poor establishment probability. It could be added to research trials to determine suitability.	/TD to revie	LDN/UFN	IEG	ERM	Shannon	TD	N/A	TD, Jun 27	Ready for Publishing
790	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	Please add to research trials	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
791	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	0			No	ESSFmv1-02 add white-flowered rhododendron	White-flowered rhododendron is an ericaceous species that prefers acidic soils, mor or moder humus forms, and generally occurs in later successional forests. It is reported that it requires a fungal symbiont that does not survive transplantation. It was considered and rejected because of potential poor establishment probability. It could be added to research trials to determine suitability.	No	LDN/UFN	IEG	ERM	Shannon	TD	N/A	TD, Jun 27	Ready for Publishing
791	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	Please add to research trials	White-flowered rhododendron is an ericaceous species that prefers acidic soils, mor or modern humus forms, and generally occurs in later successional forests. It is reported that it requires a fungal symbiont that does not survive transplantation. It was considered and rejected because of potential poor establishment probability. It could be added to research trials to determine suitability.	/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
791	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jul 27, 2022	2	Follow Up	Question	No	Is is being added to research trials? Many things "can" be added, that doesn't indicate to us that it will be.	BW Gold will add White-flowered rhododendron to research trials to determine suitability. The revision will be provided in a future update to the Reclamation and Closure Plan.	/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	TD, Aug 15	Ready for Publishing
792	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	0			No	Grass-Shrub (dams) needs to prioritize native species - this proposed mix is unacceptable	Non-native species have been removed for the table. The exception is a caveat that non-propagating agronomic grasses (e.g., rye. oats) may be considered if needed for erosion control. See additional context on this in the responses to comments 185 and 186.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
792	Chapter 4 Table 4.2-7	Revegetation	LDN_UFN		Jun 06, 2022	1	New		No	There are native oatgrasses that thrive in submesic . These should still be considered for erosion control in preference to non-native.	Agreed. As stated in Section 4.2.2.3 (Erosion and Sediment Control), "Native grass and plant species will be preferred over non-native species unless erosion and sediment control risk cannot be safely addressed, in which case non-propagating agronomics will be considered. "	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
793	Chapter 4 Section 4.2.4.1	Eco Model	LDN_UFN		Jun 06, 2022	0			No	Refer to Table 4.2-7 comments - SBSmc3-02/03 occur on shallow soils and in upper and crest slope positions - how is this area and proposed soil cover suitable for these ecosystems?	Reclamation site series—BW Gold put a lot of effort into understanding the edaphic conditions that will support vegetation communities (i.e., analysis of 1,000s of BEC-database plots from across the province and a resultant model that produces a fit between SMR and site series that is as good as the guidebook keys	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
793	Chapter 4 Section 4.2.4.1	Eco Model	LDN_UFN		Jun 06, 2022	1	New		No	This is assuming that the area will be recreated as SBSmc3-02/03. Has modelling suggested any other results? Have these been discussed as a possibility should the reclamation not create the proposed BEC zone?	Projected ecosystems presented in the plan are based on modelling outputs; no modeling results were excluded (i.e.., modelling has not suggested other results). Post-placement soil sampling (Section 4.2.6.2, Permanent Sample Plots) will enable updates to model projections based on as-built conditions to validate/refine site series projections. Ongoing vegetation monitoring will support further validation of projected site series and implementation of adaptive management measures (e.g., supplemental planting of additional species). Given the overlap in vegetation communities of neighbouring site series, it is likely that a portion of planted plant species will establish, even if the actual site series deviations from projections.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
794	Chapter 4 Section 4.2.4.1	Research	LDN_UFN		Jun 06, 2022	0			No	Where are your proposed lichen salvage/replacement/diversion methods outlined?	They are not. They will be developed prior to implementation of progressive reclamation at this site. There is good experience to draw on from B.C., eastern ON, and Yukon.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 23	Ready for Publishing
794	Chapter 4 Section 4.2.4.1	Research	LDN_UFN		Jun 06, 2022	1	New		No	Why aren't they being developed now?	Lichen re-establishment methods are scheduled to start prior to mine operations and in year +1 with the Existing Camp and FWR research trials, respectively (Section 4.2.5.1 (Vegetation and Cover Trials)). The timelines of these trials will facilitate design and testing of proposed methods early on (starting before mining), and allow monitoring over the operating mine life.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
794	Chapter 4 Section 4.2.4.1	Research	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	A clear timeline of all chapter 4 activities would be very useful to outline expected timing for activities- for instance lichen trials and rehab. A statement could be added saying the timeline will be adapted / changed as the work progresses. This would be useful for the readers, would give more confidence in the sequence of restoration, would help identify gaps and would be useful for the technitions working on the project. Please add a table showing the expected timeline and activities.	BW Gold appreciates the comment, however the application is not being updated. Please note that Table 4.2-9 (Revegetation and Cover Research Trial Site Characteristics) includes the "year available". "Year available" corresponds to when the land is projected to become available for research. BW Gold plans to implement trial as soon as possible i.e., in the year available. As stated in the trial descriptions below the table, lichen trials are planned for the Existing Camp and Freshwater Reservoir trials, which are scheduled to start in Y-2 and Y+1, respectively.	No	LDN/UFN	IEG			TD	Ready for Submission	TD, Aug 4	Ready for Publishing
795	Chapter 4 Figure 4.2-5	Map	LDN_UFN		Jun 06, 2022	0			No	Where are the progressive reclamation areas? Borrow pit? Add to/adjust legend. What is the elevation of this area?	Figure 4.2.5: Progressive Reclamation Areas near the Freshwater Reservoir has been removed from the final version of the Chapter. The associated text has been revised.	/TD to revie	LDN/UFN	IEG			TD	N/A		Ready for Publishing
795	Chapter 4 Figure 4.2-5	Map	LDN_UFN		Jun 06, 2022	1	New		No	The progressive reclamation of the FWR is still discussed in Section 4.2.5.1 Vegetation Cover. Does it encompass an area larger than the FWR on the map? If so, it should be labelled on the map.	Two areas around the FWR provide opportunities for progressive reclamation beginning in Y+1: a borrow area used for construction of the FWR (~3 ha) and a material stockpile from the excavation of the FWR (~3 ha) beginning in year +1 (Figure 4.2-6). Progressive reclamation of these areas will be carried out as part of the reclamation research program and details of planned reclamation are presented in Section 4.2.5.1, Vegetation and Cover Trials.	/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
796	Chapter 4 Section 4.2.4.2	Research	LDN_UFN		Jun 06, 2022	1	New		No	Table 4.2-9 Whitebark Pine isn't a trial area - is this the old exploration road/weather station area that Travis talked about?	Table 4.2-9 Revegetation and Cover Research Trial Site Characteristics refers to 7 areas where revegetation trials will occur, including the parkland on top of Mt. Davidson where Whitebark Pine revegetation trials will take place.	/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
796	Chapter 4 Section 4.2.4.2	Research	LDN_UFN		Jun 06, 2022	0			No	Request for additional reclamation research trials areas to be identified and utilized to inform reclamation well in advance of closure activities - especially with respect to addressing gaps/uncertainties and allowing for the opportunity to revise/renew reclamation research trials as/if needed - 5-6 years is insufficient time to collaborate with regulators and First Nations and to adjust prescriptions with new trials	An additional 1.6-ha research trial location has been identified in the ESSFmv1 near the current exploration camp (Section 4.2.5.4) that can be initiated at the beginning of the life of mine. With the addition of this new area, trials are proposed for four areas that encompass a range of conditions projected to be present on the post-closure landscape, including both BEC subzone variants. A variety of slopes, slope positions and aspects are included for the ESSFmv1, while only a flat trial area is planned for the SBSmc3, because all post-closure features in this zone will be flat (< 8°).	/TD to revie	LDN/UFN	IEG	ERM	Shannon	TD	Ready for Submission	RT: June 24	Ready for Publishing
797	Chapter 4 Table 4.2-8		LDN_UFN		Jun 06, 2022	0			No	Item #1 - how is this possible if only low-elevation areas are available for research?	See response to comment 91.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing

797	Chapter 4 Table 4.2-8		LDN_UFN		Jun 06, 2022	1	New		No	Unclear how this comment is sufficiently addressed - only low elevation areas are discussed in comment ID91	Reclamation research areas have been expanded beyond low-elevation areas, as described in Section 4.2.5.1 (Vegetation and Cover Trials). "Vegetation trials are proposed for four areas that encompass a range of conditions projected to be present on the post-closure landscape (Figure 4.2-6), including both BEC subzone variants (ESSFmv1 and SBSmc3). All site series projected to be present on the post-closure ecosystem are included in vegetation trials except SBSmc3-01, 04, 05 and 06, however they will only be present on surface soil stockpile footprints, which will likely require less intensive intervention to reclaim."	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
798	Chapter 4 Table 4.2-8		LDN_UFN		Jun 06, 2022	0			No	Item #3 - reiterate concern about timeline for reclamation research and the ability to make adjustments and test those adjustments prior to closure	We have added additional details to the text clarifying timelines. The FWR (SBSmc3) and the Existing Camp (ESSFmv1) trial areas will run for the LOM (> 20 years). The North Collection Channel tailings trial will be a short-term trial, based on which a longer-running trial that can run for the rest of the LOM will be installed. While the Lower Waste Stockpile will only run for approximately 10 years, this is sufficient time to provide insight into initial survival and establishment of native species, and validate the AWSC (SMR) of cover designs.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
798	Chapter 4 Table 4.2-8		LDN_UFN		Jun 06, 2022	1	New		No	For the Lower Waste Stockpile, is 10 yrs. enough time should the initial research design fail?	The research design will trial a variety of approaches, making it unlikely that the trial will entirely fail, and instead will highlight more successful reclamation prescriptions and approaches. This trial will focus on initial survival and establishment of native vegetation--10 years is sufficient time to evaluate this, and longer-running trials of ESSSmv1 site series (e.g., Existing Camp, North Collection Channel, and TSF beach cover) will support longer-term results for these ESSmv1 reclamation.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
799	Chapter 4 Table 4.2-8	Reclamation research	LDN_UFN		Jun 06, 2022	0			No	Item #4 - lichen planting methods (see earlier comment)? how will lichen cover be assessed? what are your targets for measuring success?	BW Gold has not developed in detail lichen transplant and evaluation methods. As stated, there is available information from similar efforts in B.C., eastern ON, and Yukon. Generally BW Gold would be evaluating lichen cover as a measure of our ability to establish lichen successfully and have the cover of those lichen increase over time. Text has been added to reflect this.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
799	Chapter 4 Table 4.2-8	Reclamation research	LDN_UFN		Jun 06, 2022	1	New		No	As per previous comment: Why aren't they being developed now?	Please refer to the response to comment 794.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
800	Chapter 4 Table 4.2-8		LDN_UFN		Jun 06, 2022	0			No	Item #6 - what if whitebark pine does not establish on lower elevation sites as proposed? How does this change the overall program and ability to meet project conditions?	Whitebark pine will be removed from the planting list and lodgepole pine and hybrid spruce planting density will be increased. It is proposed that research trials in the SBSmc3 incorporate whitebark pine to assess viability for planting on xeric and subxeric sites.	No	LDN/UFN	IEG	ERM	Shannon	TD	Ready for Submission	RT: June 24	Ready for Publishing
800	Chapter 4 Table 4.2-8		LDN_UFN		Jun 06, 2022	1	New		No	Whitebark pine is a significant species of concern. Should research trials fail, what will BW Gold do to offset the loss due to the open pit?	Please see the answer to comment 780.	T/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
800	Chapter 4 Table 4.2-8		LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	As mentioned above failure of whitebark pine and replacement of this species by lodgepole pine does not suitably mitigate the losses of whitebark in the mine area (pit mostly) as mentioned above we need to see some contingency of how the species losses will be offset should all trials fail.	BW Gold disagrees with the suggested revision and will not make the change, because this has been previously addressed in the response to Comment ID#780.	T/TD to revie	LDN/UFN	ERM		Greg		Ready for Submission	CB; July 29	Ready for Publishing
801	Chapter 4 Section 4.2.5.2		LDN_UFN		Jun 06, 2022	0			No	When will mill tailings be available - Y3?	Tailings will be available upon the start of the Operations phase (i.e. Year 1).	No	LDN/UFN	ERM		Rolf	RT	N/A		
801	Chapter 4 Section 4.2.5.2		LDN_UFN		Jun 06, 2022	1	New		No	Please update plan with this information.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
801	Chapter 4 Section 4.2.5.2		LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. It is our understanding that chapter 4 will become the reclamation and closure plan, therefore it will be revised in the future-Artemis communicated this to MMO. We want a commitment for this revision to be made in RCP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
802	Chapter 4 Section 4.2.5		LDN_UFN		Jun 06, 2022	0			No	Provide more detail on planned lichen dispersal techniques at research trial plots (as mentioned in Section 4.8.3).	Lichen dispersal techniques will be based on the most current research, using methods that are determined to be most effective. The current methods used in research trials include aerial distribution (using helicopters and a hopper system) and manual distribution (which currently has more favourable results; Ronalds and Grant 2018). The following text has been added to Section 4.2.5.1: "Detailed methods for lichen re-	T/TD to revie	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
802	Chapter 4 Section 4.2.5		LDN_UFN		Jun 06, 2022	1	New		No	As per previous comment: Why aren't they being developed now?	Please refer to the response to comment 794.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
803	Chapter 4 Section 4.2.5.3		LDN_UFN		Jun 06, 2022	0			No	What is the elevation and aspect of this area? These ecosystems occur in mid through crest slope positions, how will this be incorporated? These ecosystems provide good caribou habitat partly for their composition, but also for their location (slope position) - this appears to be a big gap in your assumptions for suitability of these areas	[Note: unclear which area is being referred to, but this response assumes that it is bullet 3, FWR trial area]. Site characteristics of all research trials are provided in the response to comment 91. As noted in 91, this trial area is flat. All areas being reclaimed in the SBSmc3 are flat, so the trial results will be applicable to those areas.	No	LDN/UFN	IEG	ERM		TD	Ready for Submission	RT: June 24	Ready for Publishing
803	Chapter 4 Section 4.2.5.3		LDN_UFN		Jun 06, 2022	1	New		No	There are no bullets in this original section…. Is flat ground good caribou habitat or should you revise this section? Is what is being asked here. This section appears to have been removed from the updated version.	Section 4.2.5.3 Use of Wetlands to Treat Water does not deal with caribou habitat. Instead, it focuses on a research program to investigate the use of wetlands to remove contaminants in contact water.	T/TD to revie	LDN/UFN	ERM		Greg/Hannah	RT	Ready for Submission	RT: June 24	Ready for Publishing
804	Chapter 4 Section 4.2.5.1		LDN_UFN		Jun 06, 2022	0			No	"Reclamation trials were initiated in 2016" do these trials still exist? Have they been measured? What do the results indicate?	Reclamation trials were initiated in 2016 on Mount Davidson to determine the suitability of reclaimed material and soils for whitebark pine reclamation. Three hundred seedlings were planted on 12 reclamation plots (25 seedlings /plot) on two slope positions on OVB or undisturbed soils (Moody and Clason 2016). A field trip was conducted to review these in 2018 and a regular monitoring schedule will be developed.	No	LDN/UFN	IEG	ERM	Shannon	TD	N/A	TD, Jun 27	Ready for Publishing
804	Chapter 4 Section 4.2.5.1		LDN_UFN		Jun 06, 2022	1	New		No	Please include results so far from the 2018 field trip.	BW Gold will make the suggested revision.	T/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
804	Chapter 4 Section 4.2.5.1		LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. Unresolved until we see an updated RCP with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will								TD; Aug 16	Ready for Publishing
805	Chapter 4 Section 4.2.5.1		LDN_UFN		Jun 06, 2022	0			No	"BW Gold will consider the reclamation potential of historic exploration areas in the ESSmv1 and ESSFmv1p for future reclamation work" other than the old exploration road which is required to be reclaimed - what other disturbances are you referring to?	Refer to response to comment ID#2.	No	LDN/UFN	BWG			TD	N/A	TD, Jun 27	Ready for Publishing

805	Chapter 4 Section 4.2.5.1		LDN_UFN		Jun 06, 2022	1	New		No	If trials are successful these sites should be more than "considered." Suggestion to rephrase with a stronger emphasis that it will be done.	BW Gold is not updating Chapter 4 as part of review of the joint application. However, the reviewer's comment will be considered in future iterations of the reclamation and closure plan.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
805	Chapter 4 Section 4.2.5.1		LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward. Unresolved until we see an updated RCP with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management								TD; Aug 16	Ready for Publishing
806	Chapter 4 Section 4.2.5.5		LDN_UFN		Jun 06, 2022	0			No	Do these long-term reference WBP plots exist currently? How many? Where? What is the proposed monitoring frequency?	Three hundred seedlings were planted on 12 reclamation plots (25 seedlings /plot) on two slope positions on OVB or undisturbed soils (Moody and Clason 2016). A regular monitoring schedule has been developed and is	No	LDN/UFN	IEG	ERM	Shannon	TD	N/A	TD, Jun 27	Ready for Publishing
806	Chapter 4 Section 4.2.5.5		LDN_UFN		Jun 06, 2022	1	New		No	Please make clear in the text that the monitoring for the 2016 plots are still ongoing.	BW Gold will make the suggested revision.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
806	Chapter 4 Section 4.2.5.5		LDN_UFN		Jul 28, 2022	2	Follow Up		No	Carry forward. Unresolved until we see an updated RCP with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will								TD; Aug 16	Ready for Publishing
807	Chapter 4 Section 4.2.5.6		LDN_UFN		Jun 06, 2022	0			No	Add: to test the suitability and effectiveness of rough and loose surface preparation and the incorporation of CWD - this should be tested alongside no treatment (third bullet) so a direct	Bullet #1 refers to actual placement methods (e.g., equipment). Bullet #3 refers to site preparation and CWD all research trials will be designed to include a control. Erosion control has been added to bullet #3 to increase	/TD to revie	LDN/UFN	IEG			TD	N/A	TD, Jun 27	ready for publishing
807	Chapter 4 Section 4.2.5.6		LDN_UFN		Jun 06, 2022	1	New		No	Where has this change been reflected? What is the new section #? The reviewer cannot comment on whether or not this issue is resolved.	Site preparation and coarse woody debris are both referenced in the revised research section (4.2.5.1, Vegetation and Cover Trials). Note that site preparation is recommended as best practice and will be included in all trials--while comparing different site preparation methods may be appropriate, we recommend against leaving areas unprepared.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
808	Chapter 4 Section 4.2.6.1		LDN_UFN		Jun 06, 2022	0			No	Third bullet - add complete species list (per LMH 25) for each plot, updated during each sampling event	A complete species list is encompassed under "estimates of percent cover by species". All species present will be documented during each sampling event.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
808	Chapter 4 Section 4.2.6.1		LDN_UFN		Jun 06, 2022	1	New		No	Where is this commitment reflected in the plan?	This is noted under the "Vegetation cover" bullet of Section 4.2.6.2 (Permanent Sample Plots).	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
809	Chapter 4 Table 4.3-1		LDN_UFN		Jun 06, 2022	0			No	Confirm sedges were collected in wetlands - i.e., no upland (dry) sedges were collected	Sedges were collected in wetland areas and were not upland sedges.	No	LDN/UFN	ERM		Greg	RT	N/A		
809	Chapter 4 Table 4.3-1		LDN_UFN		Jun 06, 2022	1	New		No	Update to include in the text.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
809	Chapter 4 Table 4.3-1		LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. Unresolved until we see an updated RCP with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
810	Chapter 4 Section 4.3.3.1		LDN_UFN		Jun 06, 2022	0			No	Unclear how a larger suite of vegetation species will be incorporated into future sampling (those suggested by First Nations) - recce seemed to focus only on those species collected in 2021	Reconnaissance in August 2021 included a total of 21 different species, 13 of which were identified by UFN and LDN as important species prior to August 2021. An additional list of important species was provided by UFN and LDN in September 2021, after the field season was complete. Not all species identified by Indigenous Nations can realistically be sampled on a regular basis to monitor for Project-related effects and the sampling program has been focused to a smaller subset of relevant species. It is possible that in the future, additional targeted studies separate from the Closure and Reclamation Plan (outside of mine site) or the regular CFMP sampling may be conducted of other species or for purposes other than monitoring to identify Project-related effects. This may be done under the Country Foods Monitoring Plan or other plans required by the EAC (e.g., EAC Condition 17) or federal Decision Statement, and sampling would be developed in consultation with Indigenous Nations.	No	LDN/UFN	Entia		Lesley	RT	N/A	TD, June 27	Ready for Publishing
810	Chapter 4 Section 4.3.3.1		LDN_UFN		Jun 06, 2022	1	New		No	Please explain why certain species cannot be sampled for monitoring. Why can't sampling schedules be altered to incorporate these species?	The sampling program for areas outside of the Mine Site (described in the Closure and Reclamation Plan but ultimately driven by the Country Foods Monitoring Plan [CFMP]) is already the largest soil, plant, and vegetation program that BW Gold is aware of for mines in BC. The program has already been expanded to include regular sampling of soil, three plant species, and three berry species. It is not possible to regularly sample all species of interest in a sampling program due to limitations in budget and time, so representative species are typically collected. BW Gold has consulted with LDN and UFN in developing the list of species to be sampled, and species have been selected to be representative of those of interest to Indigenous Nations, including species that are consumed or used by people and animals, are present in different types of habitats, have reasonable spatial distribution across the study area outside of the mine site, are reasonably abundant, and including species (e.g., willow) that are known to be hyper-accumulators of metals. As noted in the response to this comment in the previous round, there may be opportunity to develop "special" studies outside of the routine monitoring under the Closure and Reclamation Plan or the CFMP. The necessity, timing and extent of these special studies will be determined in consultation with Indigenous nations and regulators.	No	LDN/UFN	Entia		Lesley	RT	Ready for Submission	RTI June 20	Ready for Publishing
811	Chapter 4 Section 4.3.3.2		LDN_UFN		Jun 06, 2022	0			No	When does this on-site sampling begin?	As per reference in this section to Section 4.2.6.1 (reclamation monitoring section), this will be on the schedule of the reclamation monitoring of progressive/operational reclamation, so starting in year 1 after revegetation, with the caveat that vegetation sampling will only occur if it can happen without adversely impacting the young plants.	No	LDN/UFN	IEG		N/A	TD	N/A	N/A	N/A
811	Chapter 4 Section 4.3.3.2		LDN_UFN		Jun 06, 2022	1	New		No	Presumably this could be a long time after reclamation then - to avoid impacts to young plants - so what are the implications of waiting say 2, 3, 4+ years to conduct this sampling? What if there is uptake? What contingency measures could be included here (e.g., overplanting to accommodate this? that seems better than having to rip up an area and increase its cover materials or something)	Element vegetation-uptake sampling is scheduled to occur as part of reclamation research (Section 4.2.5.1, Vegetation and Cover Trials) during operations to support early indication of potential issues. Sampling of soil following placement, as recommended in Section 4.2.6.1 (Permanent Sample Plots), will also support early identification of potential issues. We expect faster-growing early successional plants to have sufficient biomass within a few years to enable sampling.	No	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
812	Chapter 4 Section 4.3.3.2		LDN_UFN		Jun 06, 2022	0			No	What sampling volumes are proposed? How will you collect (e.g., 125 mL) from a 0-2cm layer?	Sufficient sample volumes for laboratory analysis are determined in advance of each field trip in consultation with the laboratory. For thin layers, collection is done carefully. Adequate sample sizes can be collected from thin surface layers.	No	LDN/UFN	Entia	IEG	N/A	RT	N/A	TD, June 27	Ready for Publishing
812	Chapter 4 Section 4.3.3.2		LDN_UFN		Jun 06, 2022	1	New		No	Sampling volumes needed by the lab are standard. Have you experienced otherwise? Attempting to sample a sufficient volume from a 2cm thick layer has the potential to introduce considerable uncertainty in the subsequent lab analyses. The Nations are unconvinced this is possible and accurate.	The text being referenced by the reviewer is now located in Appendix 4-H, Section 4.2, not in Section 4.3.3.2 of Chapter 4. Sample volumes required by the lab vary depending on the suite of parameters or analysis being requested (e.g., higher volumes required if additional special analyses are included). Sampling volumes required may also change over time as analysis methods are modified or new methods added. It is generally good practice to confirm the volumes required by the laboratory prior to sampling to ensure that sufficient sample volumes are submitted. ICP-MS analyses require sub-1-g sample size (e.g., 0.4g of fine fraction). Even accounting for high coarse-fragment contents, this still means that less than 10g of sample are needed. We anticipate being able to collect approximately 100-200g total sample weight from a 0-2-cm layer, which would require a sampled area of approximately 10 x 10 cm.	No	LDN/UFN	Entia	IEG	Lesley/IEG	RT	Ready for Submission	RT; June 20	Ready for Publishing

813	Chapter 4 Section 4.3.4.1		LDN_UFN		Jun 06, 2022	1	New		No	Who decides if "additional soil sampling may be required … in areas of the mine site that experience greater dust deposition…" and when, and how are the Nations notified of these changes? Updates to the 5-year mine plan will be insufficient.	The Qualified Professional responsible for the reclamation/mine-site monitoring program would identify areas of dust deposition for additional soil sampling based on results of dust monitoring carried out through the life of mine, as well as based on in-field observations. BW Gold is committed to collaborating with Indigenous Groups in refinement and implementation of the reclamation-monitoring program, including engagement regarding any proposed changes to monitoring plans.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 23	Ready for Publishing
813	Chapter 4 Section 4.3.4.1		LDN_UFN		Jun 06, 2022	0			No	Soil sampling should occur more than once at reclamation trials to understand how pH and soil nutrients change over time - these are important soil properties that are known to degrade with stockpiling	This is the proposed approach for operational reclamation, not research trials, which will be monitored according to their experimental design, which (depending on the objectives of the specific research trial) may include more-intensive soil sampling to understand vegetation responses.	No	LDN/UFN	IEG		N/A	TD	Ready for Submission	TD, Jun 27	Ready for Publishing
814	Chapter 4 Section 4.3.5		LDN_UFN		Jun 06, 2022	0			No	No mention of avoiding cross contamination between sampling sites by washing equipment?	Equipment was cleaned between sampling sites to prevent cross-contamination between sites. The following has been added to the bullet list as the first bullet: "Samples will be collected by field staff trained in proper sample collection techniques and field SOPs will be used to ensure consistent sample collection and prevent cross-contamination between sampling sites."	/TD to revie	LDN/UFN	ERM		Tonia	RT	N/A	N/A	N/A
814	Chapter 4 Section 4.3.5		LDN_UFN		Jun 06, 2022	1	New		No	This was not found in the updated text.	The text is provided in Section 6 of Appendix 4-H Trace Element Uptake in Soils and Vegetation.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
815	Chapter 4 Table 4.3-1:		LDN_UFN		Jun 06, 2022	0			No	The sample sizes should be separated by distance from the mine site as these distances will be the sample units.	The update has been made in the version for submission.	/TD to revie	LDN/UFN	ERM		Tonia	RT	N/A	N/A	N/A
815	Chapter 4 Table 4.3-1:		LDN_UFN		Jun 06, 2022	1	New		No	Table 4.3-1 has been removed from most recent version.	The sample size for each species collected is provided in Table 2.2-1 of Appendix 4-H Trace Element Uptake in Soils and Vegetation. The number of samples collected at near-field, mid-field, road transect and control sites is provided.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
816	Chapter 4 Table 4.3-2		LDN_UFN		Jun 06, 2022	0	New	Comment	No	How are you developing predicted concentrations?	Predicted concentrations of soil are provided in the Human Health Risk Assessment (Attachment B of Appendix 6-A), which were based on predicted concentrations at soil and vegetation sampling sites from 2011/2012.	No	LDN/UFN	ERM		Tonia	RT	N/A	N/A	N/A
816	Chapter 4 Table 4.3-2		LDN_UFN		Jun 06, 2022	1	New	Comment	No	Why has this whole section been removed? At what time will this plan be updated to include 2021 sampling results? How often will it be updated to include annual sampling for country foods (near sites, within 1km of mine site)?	Section 4.3.9 and Table 4.3-2 were removed from Chapter 4 because they were essentially the adaptive management framework for the Country Foods Monitoring Plan (CFMP), which has different objectives and endpoints than the Reclamation and Closure Plan (RCP). The adaptive management framework for the CFMP is provided in Section 6 of the CFMP for soil, plants and berries sampled outside the Mine Site. Appendix 4-G [Possible Reclamation Success Criteria] provides the metrics specific to the RCP and Section 4.10.10 provides the adaptive management framework specific for the RCP. Sampling completed in 2021 was completed outside of the Certified Project Description boundaries. The last paragraph in Section 4.3 indicates that the results of this monitoring will be reported in CFMP reports in accordance with the reporting identified in that plan. A cumulative soil and vegetation baseline report that includes 2011, 2012, and 2021 data is in preparation and is planned to be available during application review.	No	LDN/UFN	Entia	ERM	Lesley	RT	Ready for Submission	RT; June 20	Ready for Publishing
816	Chapter 4 Table 4.3-2		LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please provide the cumulative soil and vegetation baseline report for review,	The report was distributed for review by BW Gold on July 28, 2022 via email to the EMC (including LDN and UFN).		LDN/UFN	Entia		Lesley		Ready for Submission	RT; Aug. 2	Ready for Publishing
817	Chapter 4 Table 4.3-2		LDN_UFN		Jun 06, 2022	0			No	Low/Medium/High - how long do you increase sampling frequency for? Another 3-year cycle?	Sampling frequency would be evaluated as part of annual reporting for each sampling event after the first three years of annual sampling. An example of how the frequency would be determined is as follows: After three years of annual sampling is completed (e.g., Years 1 to 3), if no significant changes are identified relative to baseline conditions, the next sampling event would occur in Year 5, which is a decrease in frequency from annually to once every 2 years. If no significant changes relative to baseline conditions are identified after Year 5 sampling, frequency would decrease by one year and the next sampling event would occur in Year 8. If significant changes were identified in Year 8, sampling frequency would increase by 1 year to once every 2 years, with the next event occurring in Year 10.	No	LDN/UFN	ERM		Lesley	RT	N/A	N/A	N/A
817	Chapter 4 Table 4.3-2		LDN_UFN		Jun 06, 2022	1	New		No	Table 4.3-2 has been removed from most recent version of the plan.	Section 4.3.9 and Table 4.3-2 were removed from Chapter 4 because they were essentially the adaptive management framework for the Country Foods Monitoring Plan (CFMP), which has different objectives and endpoints than the Reclamation and Closure Plan (RCP). The adaptive management framework for the CFMP is provided in Section 6 of the CFMP for soil, plants and berries sampled outside the Mine Site. Appendix 4-G [Possible Reclamation Success Criteria] provides the metrics specific to the RCP and Section 4.10.10 provides the adaptive management framework specific for the RCP.	No	LDN/UFN	ERM	Entia	Lesley	RT	Ready for Submission		Ready for Publishing
818	Chapter 4 Table 4.3-3		LDN_UFN		Jun 06, 2022	0			No	Low/Medium/High - how long do you increase sampling frequency for? Another 3-year cycle?	Sampling frequency would be evaluated as part of annual reporting for each sampling event after the first three years of annual sampling. An example of how the frequency would be determined is as follows: After three years of annual sampling is completed (e.g., Years 1 to 3), if no significant changes are identified relative to baseline conditions, the next sampling event would occur in Year 5, which is a decrease in frequency from annually to once every 2 years. If no significant changes relative to baseline conditions are identified after Year 5 sampling, frequency would decrease by one year and the next sampling event would occur in Year 8. If significant changes were identified in Year 8, sampling frequency would increase by 1 year to once every 2 years, with the next event occurring in Year 10.	No	LDN/UFN	ERM		Lesley	RT	Ready for Submission	RT: June 24	Ready for Publishing
818	Chapter 4 Table 4.3-3		LDN_UFN		Jun 06, 2022	1	New		No	Table removed from updated plan - otherwise resolved, as explained in Appendix 4-G.	Section 4.3.9 and Table 4.3-2 were removed from Chapter 4 because they were the adaptive management framework for the Country Foods Monitoring Plan (CFMP), which has different objectives and endpoints than the Reclamation and Closure Plan (RCP). The adaptive management framework for the CFMP is provided in Section 6 of the CFMP for soil, plants, and berries sampled outside the Mine Site. Appendix 4-G [Possible Reclamation Success Criteria] provides the metrics specific to the RCP and Section 4.10.10 provides the adaptive management framework specific for the RCP.	No	LDN/UFN	ERM	Entia	Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
819	Chapter 4 Section 4.7.12	Table reference	LDN_UFN		Jun 06, 2022	0			No	"Revegetation species for these site series are detailed in Section 4.2.3.1 and Table 4.2.4." Table 4.2-4 is actually the Reclamation-Materials Balance table and does not specify revegetation species.	The correct table reference (Table 4.2-7) has been added.	/TD to revie	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
819	Chapter 4 Section 4.7.12	Table reference	LDN_UFN		Jun 06, 2022	1	New		No	Current reference is Table 4.2-6 which is Surface Soil Stockpile Dimensions and Soil Sources	This comment is acknowledged. BW Gold will fix this in the next version of the document. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing

820	Chapter 4 Section 4.7.12	Road reclamation	LDN_UFN		Jun 06, 2022	0			No	"If there is any remaining compaction on roads that leads to impeded drainage, this would increase water availability and possibly create wetter site series but it has not been accounted for." Provide more detail on plans in place to adapt reclamation to varying degrees of water availability on roads.	Reclamation prescriptions will be targeted for the projected site series based on site topography (aspect, slope position, slope angle) and soil properties. Any deviation from projected site series will be documented during monitoring. A portion of planted vegetation is anticipated to survive due to overlap in species among site series. Additional actions, such as fill planting, can be taken as per the maintenance and adaptive management approaches outlined in Section 4.10.5.	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
820	Chapter 4 Section 4.7.12	Road reclamation	LDN_UFN		Jun 06, 2022	1	New		No	Could add points specific to interventions in place if impeded drainage results in deviation from projected site series to section 4.10.5.5.	This comment is acknowledged. BW Gold will add this in the next version of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
820	Chapter 4 Section 4.7.12	Road reclamation	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. Unresolved until we see an updated RCP with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
821	Chapter 4 Page 4-104	Road reclamation	LDN_UFN		Jun 06, 2022	0			No	Where will the windrowed Early Works soi be placed - what type of material?	Road construction during the Early Works disturbance is expected to result in the creation of windrows along road edges. These windrows will be transferred to soil stockpiles for use in reclamation. Blackwater will retain all the soil salvaged during early works, and the volume of this soil will be added to the volume of available soil when volume estimates are available from Early Works. Any new roads that are created during the life of the Project will be salvaged and stockpiled.	No	LDN/UFN	BWG			TD	N/A	TD, Jun 27	Ready for Publishing
821	Chapter 4 Page 4-104	Road reclamation	LDN_UFN		Jun 06, 2022	1	New		No	What type of material?	The responder is unable to find the text in question on page 4-104 (4-104 is the reference list). Could the reviewer please restate the comment with the correct page reference?	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing

821	Chapter 4 Page 4-104	Road reclamation	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Section 4.8.1, page 4-89 - What type of surface soil material stockpile will the early works windrowed material contribute to?	The surface material salvaged for use as reclamation material during the construction of early works will include a range of material types as described in Section 4.2.1. Table 4.2-3 summarizes the available salvageable area and corresponding volume of surface soil (glaciofluvial, organic, mixed mineral) for each mine component type, including roads.		LDN/UFN	BWG					AT, Aug 09	Ready for Publishing
822	Chapter 4 Page 4-105	Road reclamation	LDN_UFN		Jun 06, 2022	1	New		No	Sentence has been removed from updated plan. Please clarify within the plan that preference will be given to native plant species and non-native species that may be used will be shared with First Nations for consideration and for the opportunity to identify comparable native species.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 18	Ready for Publishing
822	Chapter 4 Page 4-105	Road reclamation	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. Unresolved until we see an updated RCP with the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
822	Chapter 4 Page 4-105	Road reclamation	LDN_UFN		Jun 06, 2022	0			Yes	Preference must be given to native plant species, approved non-natives should be shared with First Nations for consideration and for the opportunity to identify comparable native species	Preference will be given to native plant species, and non-native species that may be used will be shared with First Nations for consideration.	No	LDN/UFN	IEG	ERM		TD	N/A	TD, Jun 27	Ready for Publishing
823	Chapter 4 Page 4-118	Typo	LDN_UFN		Jun 06, 2022	0			No	security checkpoint will continue **TO** authorize vehicle access to the Project by way of issuing a Permission	The sentence has been revised to include the missing word.	No	LDN/UFN	ERM		Rolf/Mark	RT	N/A	N/A	N/A
823	Chapter 4 Page 4-118	Typo	LDN_UFN		Jun 06, 2022	1	New		No	Access management section has been removed from updated plan?	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Rolf/Mark	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
823	Chapter 4 Page 4-118	Typo	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. It is our understanding that chapter 4 will become the reclamation and closure plan, therefore it will be revised in the future-Artemis communicated this to MMO. We want a commitment for this revision to be made in RCP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
824	Chapter 4 Section 4.10.1 - 4.10.4		LDN_UFN		Jun 06, 2022	0			No	To be reviewed by appropriate QPs	Specialist consultants, including Qualified Persons who supported the preparation of the Application are identified in Table 1.3-5 of Section 1. Where applicable, signatures and/or stamps are included in reports and management plans.	No	LDN/UFN	ERM		Rolf	RT	N/A	N/A	N/A
824	Chapter 4 Section 4.10.1 - 4.10.4		LDN_UFN		Jun 06, 2022	1	New		No	Needs reference in EAO application as well. Please add to this plan.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
824	Chapter 4 Section 4.10.1 - 4.10.4		LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry forward. It is our understanding that chapter 4 will become the reclamation and closure plan, therefore it will be revised in the future-Artemis communicated this to MMO. We want a commitment for this revision to be made in RCP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
825	Chapter 4 Section 4.10.5.1	Vegetation and Soil Monitoring	LDN_UFN		Jun 06, 2022	0			No	"Plots that are considered successful based on the selected indicators after two consecutive samplings can be removed from the monitoring program to decrease plot densities in heavily sampled early-reclamation areas." Provide more detail on selected indicators. What is the rationale for the basis of two consecutive samplings?	This relies on all indicators, which together represent a comprehensive picture of ecosystem function and composition, meeting thresholds that show the ecosystem is on the desired successional trajectory. Monitoring is scheduled to last for at least 10 years and every 5 years thereafter, so two consecutive monitoring events ensures that these trends are stable for at least 5 years.	No	LDN/UFN	IEG			TD	N/A	TD, June 27	Ready for Publishing
825	Chapter 4 Section 4.10.5.1	Vegetation and Soil Monitoring	LDN_UFN		Jun 06, 2022	1	New		No	Change wording to indicate all indicators then. Explain how you are arriving at your conclusion that 2 sampling equals stable ecosystems for 5 years.	This comment is acknowledged. BW Gold will update the wording in next version of the document. Achievement of the many proposed indicators (see Appendix 4-G), (e.g., self-sustaining native vegetation), is not anticipated to be achievable immediately following reclamation, necessitating longer-term monitoring, and is not expected to be possible without the ecosystem being steadily on the desired trajectory. The second sampling event five years after achievement of success criteria is proposed to act as confirmation of results.	T/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
826	Chapter 4 Section 4.10.5.5	Maintenance	LDN_UFN		Jun 06, 2022	0			No	"Seeding non-propagating agronomic grasses in areas where vegetation has been slow to establish and slumping or rilling has been observed." Isn't there a priority to use native species if possible?	If fast-growing native species establish successfully and quickly enough for erosion reduction, non-propagating agronomics would not be necessary. However, they are a good short-term option that provides vegetation cover and starts building organic matter, without impacting the long-term successional trajectory (the way that propagating agronomics do). BW Gold has revised the wording in this section to: "Seeding non-propagating agronomic grasses in areas where native vegetation has not established sufficiently quickly to reduce erosion and slumping or rilling has been observed".	No	LDN/UFN	IEG			TD	N/A	TD, Jun 27	Ready for Publishing
826	Chapter 4 Section 4.10.5.5	Maintenance	LDN_UFN		Jun 06, 2022	1	New		No	As mentioned in previous comments, if nonnative vegetation is to be used, First Nations species to be used should be shared with First Nations for consideration and for the opportunity to identify comparable native species.	BW Gold agrees to this.	T/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
826	Chapter 4 Section 4.10.5.5	Maintenance	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please make a commitment to include this in text in the next version of this plan.	BW Gold commits to revision of the Reclamation and Closure Plan (as a stand-alone document) to include the information provided in response to the Round 1 comment.		LDN/UFN	ERM		Valerie		Ready for Submission	CB; July 29	Ready for Publishing
827	Chapter 4 Section 4.10.5.5	Maintenance	LDN_UFN		Jun 06, 2022	0			No	"Exposed surfaces that have not yet received a reclamation prescription, particularly those adjacent to reclamation areas, should be temporarily revegetated using non-propagating agronomic grasses to avoid the introduction and establishment of invasive plants." Same as comment above.	See response above to comment 185. BW Gold has revised the text to: "Exposed surfaces that have not yet received a reclamation prescription, particularly those adjacent to reclamation areas, should be temporarily revegetated using fast-growing native plant species that provide ground cover for erosion control. If necessary, native plans can be supplemented with non-propagating agronomic grasses to provide short-term erosion control but avoid the introduction and establishment of non-native plants."	T/TD to revie	LDN/UFN	IEG			TD	N/A	TD, June 27	Ready for Publishing
827	Chapter 4 Section 4.10.5.5	Maintenance	LDN_UFN		Jun 06, 2022	1	New		No	See additional comment for ID185 [As mentioned in previous comments, if nonnative vegetation is to be used, First Nations species to be used should be shared with First Nations for consideration and for the opportunity to identify comparable native species.]	BW Gold agrees to this.	T/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
827	Chapter 4 Section 4.10.5.5	Maintenance	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please make a commitment to include this in text in the next version of this plan.	BW Gold commits to revision of the Reclamation and Closure Plan (as a stand-alone document) to include the information provided in response to the Round 1 comment.		LDN/UFN	ERM		Valerie		Ready for Submission	AT, Aug 09	Ready for Publishing
828	Chapter 4 Section 4.11		LDN_UFN		Jun 06, 2022	1	New		No	Comment not answered in BW response.	BW Gold provided the reclamation cost estimate to LDN and UFN on May 4, 2022.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
828	Chapter 4 Section 4.11		LDN_UFN		Jun 06, 2022	0			No	Nations are requesting that information be provided on the reclamation bonding for this project as the Nations believe there is undue liability and risk in the current project design	As required by the IRT (dated November 25, 2021), BW Gold will be preparing a cost estimate for a low-grade ore stockpile contingency plan. The LGO contingency plan consists of moving the stockpile at its maximum planned storage volume and placement into the open pit where it will be flooded. The contingency plan includes the continued treatment of LGO contact water in accordance with the mitigation measures proposed for the project until the LGO has been rehandled to the open pit. Despite provision of the cost estimate for this contingency, BW Gold plans to mill the low-grade ore stockpile prior to closing the mine.	No	LDN/UFN	BWG			TD	N/A	TD, Jun 28	Ready for Publishing

829	Chapter 4 Section 4.14	References in list but not in text	LDN_UFN		Jun 06, 2022	0			No	ERM 2016a, ERM 2016b, ERM 2021, Government of Canada 2021, Health Canada 2010a, Health Canada 2010b, Smreciu et al. 2002, Vogt and Janin 2017,	ERM 2016a and ERM 2016b are referenced in Section 4.3.1.1 Baseline Sampling in 2011 and 2012. ERM 2021 has been removed from the reference list. Government of Canada 2021 has been added to Section 4.2.7.1. Health Canada 2010a and 2010b have been removed from the reference list. Smreciu et al. 2002 and Vogt and Janin 2017 have been removed from the reference list.	No	LDN/UFN	ERM	Entia		RT	N/A	N/A	N/A
829	Chapter 4 Section 4.14	References in list but not in text	LDN_UFN		Jun 06, 2022	1	New		No	There is no section 4.3.11, ERM references still missing from text.	In Chapter 4 (issued April 2022 version D.1), we could not identify a reference to Section 4.3.11 in Section 4.14, and a search of the pdf document for "4.3.11" yielded no results. ERM (2021) refers to the surface water quality baseline report and is cited in Section 4.1.2.1. The ERM (2016a and 2016b) references should have been removed from the reference list in Chapter 4 when the text in which they were cited was moved to Appendix 4-H. Please disregard these two citations in the reference list for Chapter 4.	No	LDN/UFN	ERM	Entia	Tonia/Mark/ Lesley	RT	Ready for Submission	RT; June 29	Ready for Publishing
830	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	0			No	"Names and, if applicable, professional certifications and professional stamps/seals, of those responsible for the preparation of the plan, program, or other document" - Please provide this.	Contributors to Chapter 4 have been identified in Chapter 1. Where applicable, reports included as appendices have been signed and/or stamped.	No	LDN/UFN	ERM			RT	N/A	N/A	N/A
830	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	1	New		No	Provide reference to a location found within the EAO application/this plan for contributors of this plan.	Section 8 of Appendix 4-A (End Land Use Plan) provides the names of Rolf Schmitt, P Geo and Justin Straker, MSc P.Ag as the two Qualified Professionals that prepared the plan.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
831	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	0			No	"The adaptive management in the plan must include…the methods that will be applied to detect when a numeric trigger, or type or level of change has occurred" Please provide more specific detail on these methods relevant to this plan.	Methods are included in Section 4.10. In some cases, detailed methods are referenced from other Chapters of the Application.	No	LDN/UFN	ERM			RT	N/A	N/A	N/A
831	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	1	New		No	Monitoring methods are included in Section 4.10 however, there is very little mention of the methods to be applied to detect when triggers or changes occur.	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	T/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
831	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Discussion have not been had with MMO on this, request comment from MMO.	The Chapter 4 Appendix A (ELUP) has been updated with Sections 5.1.4 and 5.1.5 related to relcamation research and monitoring. The monitoring section (5.1.5) includes references to several monitoring programs such as reclamation material monitoring during salvage and stockpiling, water quality monitoring, trace element update in soils and vegetation as well as sub-plans to support the RCP such as the white bark pine management plan. The programs and sub-plans all provide methods to be applied when triggers or changes occur such as in the aquatic effects management plan, white bark pine management plan and trace element uptake in soils and vegetation (through the country foods monitoring program).		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD; July 29	Ready for Publishing
831	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	Section 5.1.5 states that details of the monitoring plan, including thresholds, will be developed in the future. This does not describe the methods that will be applied when a trigger or change occurs for each objective (only referenced vagely in 5.1.4.1, not much detail), as the numeric trigger is not even established yet. The Nations understand that details into mine operation are a priority to the proponent, however the proponent needs to recognize that end land use is a priority to the Nations over anything else and should not be "pushed" into future planning. Time should be spent determine the specifics outlined above.	This comment is acknowledged. A robust reclamation research and monitoring program has been proposed through the Chapter 4 Reclamation and Closure Plan and was outlined in the round 2 response. BW Gold will report out annually on the RCP through the Annual Reclamation Report (ARR) and continue to seek input from Indigenous Nations through that reporting process.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
831	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Oct 06, 2022	4	Follow Up	Comment	No	Proposing a robust reclamation research and monitoring program to be developed at a later date does not meet the current requirement to have an adaptive management plan that includes "the methods that will be applied to detect when a numeric trigger, or type or level of change has occurred, " We are requesting a memo detailing methods to detect when a type or level of change has occurred, including explicit numeric triggers.	BW Gold respectfully disagrees with the comment. A robust reclamation research and monitoring program has been proposed through the Chapter 4 Reclamation and Closure Plan and was outlined in the round 2 response. Reclamation research is different than active progressive reclamation in that it follows the scientific method (i.e. question -> research topcis area -> hypothesis -> test with experiment -> analyze data -> report conclusions). This is different than active progressive reclamation where you would likely have active triggers such as percent cover vegetated, vegetation mortaility targets etc that may require adaptive management. These triggers around progressive reclamations would come in future iterations of the reclamation and closure plan that has also been informed at that point by the reclamation research. Essentially, the outcomes of the research and monitoring programs will be used to inform "methods to be applied to detect when triggers or changes occur", basically the adaptive management measures for the actual reclamation of the mine.		LDN/UFN	BWG		Travis		19-Oct-22	TD, Oct 20	Ready for Publishing
831	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Nov 17, 2022	5	Follow Up		Yes	Thank you for your response. It is understood that varying levels of programs have been established, and provide robust methods for monitoring. However, what is being asked here is to provide a numeric trigger point in which these robust methods will be deployed. For example, if X amount of vegetation cover in an area is not achieved in Y time, then method Z will be implemented. It is understood that under adpative management things will continually change, as it should. Yet, determining a trigger for this stage is not unreasonable, and reassures the Nations that certain parameters of concern will not go beyond a pre-determined level before adaptive management procedures are implemented. If these specific trigger points already exist in other plans, the reviewer is asking for a summarized list that is both easy for the Nations to understand and find, as well as the proponent to ensure these triggers are not accidentally overlooked from being scattered in various plans. Please see page 2 of Appendix A: Concordance Table with Environmental Assessment Certificate #M10-01 Conditions (June 21, 2019): Condition 3 (Adaptive Management) E within the End Land Use Plan for reference to this request.	BW Gold would like to carry this comment forward as a permit condition		LDN/UFN	BWG				Ready for BWG Review	TD, Dec 8	Ready for Publishing
832	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	0			No	"a description of the process for and timing to alter existing mitigation measures or develop new mitigation measures to reduce or avoid effects;" Include more detail on the "process for and timing to". Not specified in section 4.10 as mentioned.	The process and timing for updates to mitigation and management measures are included under each subsection within Section 4.10.	No	LDN/UFN	ERM			RT	N/A	N/A	N/A
832	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	1	New		No	Subsections to Section 4.10 do not discuss the ***process of altering*** existing mitigation measures or developing new measures to reduce/avoid effects.	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	T/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
832	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Discussion have not been had with MMO on this, request comment from MMO.	Implementation of the Reclamation and Closure Plan is somewhat different than other management plans and the mitigations in them to prevent or reduce potential impacts to the environment in that it prescribes measures and prescriptions to set the closed mine on a trajectory to achieve landscapes that most closely resemble pre-mining conditions.		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD; Aug 2	Ready for Publishing
833	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	0			No	"identification of the new and/or altered mitigation measures that will be applied when any of the changes identified in paragraphs a) to c) occur, or the process by which those will be established and updated over the relevant timeframe for the specific condition;" Provide more detail on alteration of mitigation measures after changes may occur and the monitoring program that will be used to determine if these new mitigation measures are effective (incl. the scope, content, and frequency of reporting the implementation of altered measures). Not specified in section 4.10 as mentioned.	The process and timing for updates to mitigation and management measures are included under each subsection within Section 4.10.	No	LDN/UFN	ERM			RT	N/A	N/A	N/A
833	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	1	New		No	Section 4.10 does not discuss mitigation measures or any alteration of mitigation measures	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	T/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing

833	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Discussion have not been had with MMO on this, request comment from MMO.	Refer to responses to comments 831 and 832.		LDN/UFN	BWG		Travis		Ready for Submission	TD; Aug 2	Ready for Publishing
833	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	Sections 5.1.4 - 5.1.6 simply states that altered mitigations measures will apply, but does not identify them specifically. Please see Nations' round 3 response to comment 831.	Please see BW Gold's response to the Nations' comment 831 (round 3).		LDN/UFN	BWG		Travis		Ready for Submission	RT; sept 15	Ready for Publishing
833	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Oct 06, 2022	4	Follow Up	Comment	Yes	BW Gold's response to comment 831 does not adequately address our concern here. Simply proposing that altered mitigation measures will apply and not explicitly stating what these will be or at least the process by which they will be established and updated does not meet the permit condition. We are requesting a memo that provides these details or reference to where they can be found.	Please refer to the response provided in 831. Furthermore, BW Gold does has not seen a permit condition for this or an explicit JAIR or IRT req't related to reclamation research triggers or adaptive management requirements.		LDN/UFN	BWG				19-Oct-22	TD, Oct 20	Ready for Publishing
833	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Nov 17, 2022	5	Follow Up	Comment	Yes	"Thank you for your response. It is understood that varying levels of programs have been established, and provide robust methods for monitoring. However, what is being asked here is to provide specifics on the altered mitigation levels for known concerns. For example, if X amount of vegetation cover in an area is not achieved in Y time, then method Z will be implemented. It is understood that under adpative management things will continually change, as it should. Yet, determining alternative mitigation measures for this stage is not unreasonable, and reassures the Nations that certain parameters of concern will have solutions. If these specific altered mitigation measures already exist in other plans, the reviewer is asking for a summarized list that is both easy for the Nations to understand and find, as well as the proponent to ensure these measure are not accidentally overlooked from being scattered in various plans." Please see page 2 of Appendix A: Concordance Table with Environmental Assessment Certificate #M10-01 Conditions (June 21, 2019): Condition 3 (Adaptive Management) G within the End Land Use Plan for reference to this request	BW Gold would like to carry this comment forward as a permit condition		LDN/UFN	BWG				Ready for BWG Review	TD, Dec 8	Ready for Publishing
834	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	0			No	"incorporation of mitigation targets related to valued components examined in the Application, including but not limited to wildlife and wildlife habitat, vegetation, and ecosystems, and monitoring for those targets;" This condition does not have a section attached to it in Concordance table (Appendix 4-A) - please provide detail to where this information is provided in text	Possible Reclamation Success Criteria are provided in Appendix 4-E.	No	LDN/UFN	ERM			RT	N/A	N/A	N/A
834	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jun 06, 2022	1	New		No	Appendix 4-E does not include mitigation targets related to wildlife and wildlife habitat.	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	/TD to revie	LDN/UFN	ERM		Rolf/Greg/Hannah	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
834	Chapter 4 Appendix 4-A	Concordance	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Discussion have not been had with MMO on this, request comment from MMO.	Refer to responses to comments 831 and 832.		LDN/UFN	BWG		Travis		Ready for Submission	TD; Aug 2	Ready for Publishing
834	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	There is no inclusion of mitigation targets for wildlife in sections 5.1.4 - 5.1.6	Refer to responses to comments 831 and 832. Also pls refer to the latest WMMP provided to to Indigenous Nations including LDN and UFN on August 4th, 2022.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
834	Chapter 4 Appendix 4-A	Concordance	LDN_UFN Baylie Sjodin		Oct 06, 2022	4	Follow Up	Comment	No	Sections 5.1.1.3 and 5.1.2 provide some information on mitigations surrounding VC's but do not provide detail or reference to "monitoring for those targets", please make this edit within this plan to clearly meet the condition listed in reviewer's original comment.	Unfortunately, the EAC condition is awkwardly worded - where it states "mitigation targets" for the End Land Use Plan (ELUP) (Condition 25.e) it is referring to targets for end land use objectives. The first objective of the ELUP (Section 2) is to "Establish end land use objectives", which are listed in Section 5.1, with the first objective being "1) A mix of sustainable conditions supporting wildlife habitat, traditional and current use by Indigenous peoples. and the second one being "2) Self-sustaining vegetation that will progress to plant communities similar to pre-disturbance ecosystems as supported by the results of the ecohydrological modeling". Representative species/Valued Components were then chosen, in consultation with Indigenous groups and suitable habitat for these species identified in Appendix A (and repeated in Tabled 5.1-1 and 5.1-3 of the ELUP). Habitat for these species is listed as a reclamation priority, with specific vegetation communities listed as objectives for each mine component at closure. Post closure monitoring of these reclamation priorities is discussed in Section 5.1.5 to determine if these communities have been established, and a adaptive management framework is proposed in Section 5.1.6.		LDN/UFN	BWG				19-Oct-22		
835	Chapter 4 Reclamation and Closure Plan Table 4-7-1 and Other Sections (not specified)	General Comment	CSFN (Farzad Mohamm, Rina Freed, et al.)	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 06, 2022	1	New	Clarification	No	We note some inconsistencies in the Chapter 4 that make the review process difficult. For example, Table 4-7-1 shows that the reclamation of the Low-Grade Ore (LGO) stockpile will start in both years 22 and 24.	Reclamation of the pad and infrastructure where the LGO was previously located will start in year 24, thank you for noting this. BW Gold will not be making further edits to the Application at this time. However, BW Gold will track substantive errors and omissions and will provide a memo that corrects them.		CSFN	IEG			TD	Ready for Submission	TD, Jun 23	Ready for Publishing

836	Chapter 4 Reclamation and Closure Plan Section # not provided: Mitigation Planning and Closure Cost Estimate	Exceeding WQG's in Post-Closure and Mitigation Requirements	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Recommendation	No	Water quality predictions indicate the effluent in post-closure is predicted to cause exceedances of the BC Water Quality Guidelines (WQGs) in the downstream receiving environment (as identified in LGL's review submitted with this document). We note that these exceedances are not predicted for the mine operations phase. The Reclamation and Closure Plan (RCP) needs to include mitigations that succeed in reaching the BC WQGs in the receiving environment as a minimum goal. During the post-closure phase, the goal is to return the land and water to the original state to the extent possible. Water quality should improve in post-closure, not deteriorate following mine operations. During the EA there were commitments made to reach water quality guidelines during all project phase (see EAC Condition 27, Water Quality Management included herein). Condition 27: During Construction, Operations, Closure, and Post-Closure, the Holder must ensure the Project does not cause downstream water quality to exceed BC Water Quality Guidelines, unless the Holder has developed and ENV has accepted one or more Science Based Environmental Benchmarks (SBEBs), in which case the accepted SBEB must not be exceeded. Downstream water quality includes water quality in, at a minimum, Davidson Creek and Creek 661, as monitored in accordance with paragraph (d) of this Condition While the EMA permit will not allow for increases post-closure without an amendment (and is not the concern we are raising), the EMLI permit under the Mines Act (MA) will need to reflect appropriate mitigations and bonding. Recommendation: The RCP must include additional mitigations that lead to target water quality objectives (i.e.. BC WQGs) being met in the receiving environment. Once this is achieved, then the closure cost estimate needs to be presented to show that the closure bond reflects the appropriate mitigations proposed. While closure plans can change over the project operational phase, a minimum goal and a method of achieving the minimum goal is essential in the current RCP. Having no plan to reach required water quality targets is not an acceptable approach. The RCP needs to be revised to	BW Gold will be required to submit updates to the MDSP and RCP plans every five years at a minimum, which will include water quality model updates. Furthermore, Provincial EA condition 34 requires BW Gold to prepare a Closure and Post-Closure Water Quality Management Plan prior to the commencement of Operations. This plan must be developed in consultation with Indigenous Groups, EMLI, and ENV and submit the plan to EAO for review at the time of planned commencement of operations. The plan must be updated at least every five years from the commencement of operations. This plan must consider mitigations and whether and how the water treatment technology differs from the technology proposed in the EA Application/Environmental Impact Statement. Moreover, Part 10, section 10.1.12 of the Health, Safety and Reclamation Code of Mines in BC (EMLI 2021) requires that a TSF has a water balance and water management plan for permitted life of the mine, prepared by a qualified person. After commencement of operations, the water balance and water management plans must be reconciled annually (Part 10, section 10.4.1). These updates may identify the need for science-based environmental benchmarks (SBEB). As required by EAC Condition 26, SBEBs must be developed in consultation with Indigenous Groups. The mitigations proposed for construction and operations are described in the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). Section 11 of the MSDP includes a groundwater adaptive management plan and contingency measures actions, which include pumping wells. Closure costs will be assessed by EMLI when it determines the closure bond for the Project. BW Gold has proposed additional closure research projects related to water treatment. These include use of constructed wetlands for treating water and pit lake amendments to improve water quality in the pit lake. All this said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC. If these optimizations are adopted as the base case, BW Gold commits to updating the closure cost estimate in a later review phase accordingly.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
837	Chapter 4 Reclamation and Closure Plan Section # not provided: Mitigation	Concerns LGO ARD Liability	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Information request	No	We have strong concerns with using bonding to address the proposed large LGO ARD liability (on the order of $450 Million). We have raised these concerns in our review comments for chapter 3. In addition, we raise these concerns with Chapter 4 and the RCP given that reducing liabilities and reducing bonding is a win-win for all parties including BW Gold. We are interested in reducing the closure bond - e.g., through exploration of the mitigation options for LGO. Discussion on this topic is ongoing and welcomed.	BW Gold provided the reclamation cost estimate to LDN and UFN on May 4, 2022. This estimate includes the cost of the LGO contingency.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
838	Chapter 4 Reclamation and Closure Plan Section 4.11	Reclamation Cost Estimate	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Information Request	No	We expect that a collaborative, good faith effort will be made to work with the Nations on the review of the RCP including the closure cost estimate. For the Ascot project permitting, the closure cost estimate that was submitted to EMLI was provided to the Nation (on a confidential basis). This was a collaborative review that has recently wrapped up and has been successful. We are disappointed and strongly concerned with the statements in the RCP, Section 4.11 as shown below: "4.11 Reclamation Cost Estimate: A security estimate has been submitted separately for confidential review by EMLI as per Section 10.1.3(i) of the Code" We have strong concerns with BW Gold not providing any information to the Nations. When all need to make efforts to reach consensus and be transparent. Providing information creates a positive atmosphere rather than a lack of trust and animosity. Providing this information may be required by participation agreements or agreements being drafted. In addition, EMLI may require the information be provided . If the information is provided, then we work collaboratively with EMLI and the proponent to understand and reflect on the closure cost estimate. If a proponent does not provide a closure cost estimate at all, this leaves us with the feeling that collaboration is not taken seriously and there is a lack of transparency (i.e.., the proponent is hiding information about the bonding). If the information is provided, then we work collaboratively with EMLI and the proponent to understand and reflect on the closure cost estimate. If a proponent does not provide a closure cost estimate at all, this leaves us with the feeling that collaboration is not taken seriously and there is a lack of transparency (i.e.., the proponent is hiding information about the bonding). Significant problems for the Nations exist without information being provided including the need to complete the cost estimation process without input from the proponent. There are also potential risks of unfunded liabilities in the event we cannot review this critical information. However, the impact or harm to BW Gold (from providing this information) is unclear. Being transparent and collaborative with Nations is expected of proponents. There is a very brief clause on confidentiality for closure cost estimates in the MA (a very short phrase). We have had numerous conversations with EMLI staff, and we generally agree with EMLI staff on the topic of providing closure cost estimate information to Nations to review in confidence, similar to the	BW Gold provided the reclamation cost estimate to LDN and UFN on May 4, 2022.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
839	Chapter 4 Reclamation and Closure Plan Section # not provided: Mitigation Planning and Closure Cost Estimate	Water Treatment Operation and Maintenance Costing Information	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Recommendation	No	Please provide in the RCP a detailed discussion of Closure and Post-Closure water treatment operation and maintenance plans along with all associated costing information. This is important considering that the proposed membrane treatment process requires diligent maintenance and experienced operators to ensure continuous operation. Moreover, the water treatment requirements for LGO must be considered. Based on the water quality modelling results and the ML/ARD plan, seepage at the toe of the LGO pile is highly acidic and requires a large amount of lime reagent for neutralization. The treatment also produces relatively large quantities of solid by-products including gypsum and metal-laden waste that according to the application will be stored in the TSF. Recommendation: All-inclusive costs of treatment must be provided in the RCP which includes, but is not limited to factors such as maintenance, operations, residue management, labour, reagents, and power. This also applies to the metals removal treatment plant that will treat pit water during the operation and NF brine thereafter. Costs associated with water management and treatment must be all-inclusive covering all necessary contingency measures.	BW Gold provided the reclamation cost estimate to LDN and UFN on May 4, 2022. The estimate includes all-inclusive water treatment costs and has been prepared in accordance with applicable guidance.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
840	Chapter 4 Reclamation and Closure Plan Section # not provided: Mitigation Planning and Closure Cost Estimate	Closure Costs Associated with TSF Coverage and Seepage	CSFN (Farzad Mohamm, Rina Freed, et al.)	Rolf Schmitt, P Geo.; ERM Consultants Canada Ltd.	Jun 06, 2022	1	New	Recommendation	No	Chapter 4 states that a total of 130 cm of cover material will be placed over PAG rock to prevent seepage but does not provide costing information for the mitigation measure implemented. This information is required for technical/costing review to ensure the planning and scale of efforts is reasonable. Recommendation: Chapter 4 should include closure costing for key mitigations including covers and seepage.	In accordance with Section 10.1.3(i) of the Code and section 4.11 of the 2019 Joint Application Information Requirements, a mine closure and reclamation cost estimate for the Blackwater Mines Act/Environmental Management Act Permits Application has been submitted to EMLI for review and establishment of bonding security. The cost estimate includes costing for mitigation.		CSFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing

841	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Requirement for Water Treatment	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Recommendation	No	In post-closure, surplus water from the pit lake and TSF will be discharged into the environment. The application is not clear if water treatment for discharge is required post-closure. In some instances, it is mentioned "if treatment is required" and in others, "treatment is required". This is confusing to the reader. The results of water quality modelling show water treatment is required post-closure and this should be clearly and consistently stated throughout the text. Recommendation: The application should be clear and consistent on the treatment required post-closure.	Water treatment is required in post-closure. The current approach is to treat water using membrane treatment. BW Gold is planning closure research projects to determine if alternate treatments are viable (i.e.. wetlands or pit lake amendments). If either or both of these reclamation strategies are proven, membrane water treatment may not be required for all of the mine site water remaining on site. The language is intended to reflect that opportunity. BW Gold will be required to submit updates to the MDSP and RCP plans every five years at a minimum, which will include water quality model updates. Furthermore, Provincial EA condition 34 requires BW Gold to prepare a Closure and Post-Closure Water Quality Management Plan prior to the commencement of Operations. This plan must be developed in consultation with Indigenous Groups, EMLI, and ENV and submit the plan to EAO for review at the time of planned commencement of operations. The plan must be updated at least every five years from the commencement of operations. This plan must consider mitigations and whether and how the water treatment technology differs from the technology proposed in the EA Application/Environmental Impact Statement. Moreover, Part 10, section 10.1.12 of the Health, Safety and Reclamation Code of Mines in BC (EMLI 2021) requires that a TSF has a water balance and water management plan for permitted life of the mine, prepared by a qualified person. After commencement of operations, the water balance and water management plans must be reconciled annually (Part 10, section 10.4.1). These updates may identify the need for science-based environmental benchmarks (SBEB). As required by EAC		CSFN	BWG			TD	Ready for Submission	rt; June 13	Ready for Publishing
842	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Water Treatment Objectives	CSFN (Farzad Mohamm, Rina Freed, et al.)	Lorax Environmental Services Ltd.	Jun 06, 2022	1	New	Recommendation	No	Contaminants of potential concern (COPCs) are predicted to exceed BC Water Quality Guidelines (WQGs) including ammonia, lead, arsenic, and cadmium (for post closure). For example, Nanofiltration (NF) membrane filtration is proposed for treatment of the contaminated water combined with treatment of the brine before disposal in the pit. While NF can produce clean water for discharge, it does not destroy COPC. As such and considering that the proposed brine treatments with either sulphide or ferric iron reagents only target metals and metalloids, ammonia and other nitrogen species, as well as sulphate and thiosalts, are naturally expected to build up in the water. Specifically, while they can take many forms and are difficult to measure accurately, thiosalts are toxic to aquatic organisms at concentrations significantly lower than sulphate. There is an example site referenced in the Abitibi region for the decay rate of nitrogen species. There are also many similar operations in BC with elevated concentrations of thiosalts in the water. The proposed brine treatment can also result in the accumulation of several COPCs in the pit lake over time that eventually impacts the quality of the NF-treated discharge water to the point of non-compliance or toxicity. Recommendation: Please clearly state the COPCs that will require treatment as well as how each one will be treated to avoid accumulation and non-compliance with BC WQGs.	In the post-closure period, COPCs requiring treatment include sulphate and certain metals and metalloids with aquatic life guidelines (e.g., As, Cd, Cu, Mn, Pb, Sb, Zn). Loading sources for these COPCs include the ECD, open pit and upper waste stockpile. While NF treatment does not destroy COPCs, pre-treatment using ferric salts and sulphide reagents will result in the removal of some COPCs (e.g., metals) from solution (as precipitates). Other COPCs not removed during NF treatment (e.g., nitrogen compounds, cyanide species) will report with the brine to the pit lake. The discharge of brine to the pit lake bottom will serve to engineer stratification and minimize potential for brine entrainment to the treatment system. It is acknowledged that there is a finite capacity for brine storage, and therefore there is the potential over the long-term (after multiple decades) for accumulated products to influence the influent characteristics to the NF plant and its efficiency. Post-Closure water management and treatment will be evaluated in further detail in future regulatory submissions.		CSFN	Lorax			GM	Ready for Submission	GM; June 14	Ready for Publishing
843	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Organic Fouling of Membranes - Long Term Operation	CSFN (Farzad Mohamm, Rina Freed, et al.)	Lorax Environmental Services Ltd.	Jun 06, 2022	1	New	Recommendation	No	NF and in general membrane treatment use antiscalant to avoid fouling. Anticalins are typically organic molecules that are dosed into the water in small quantities to avoid precipitation of scaling substances such as gypsum or calcite or organic matter. Antiscalant reports to the brine which will be recycled to the pit. This means the pit will be supplied with a steady stream of nutrient organic matter that will result in bacterial growth and therefore, subsequent fouling of the NF membrane elements similar to what is expected to occur from vegetation growth on TSF beach. Additionally, bacterial activity in the pit can result in the formation of metal-organic complex molecules that will further stabilize metals in the water. Recommendation: Please clearly state how the recycling of organic antiscalant to the pit is expected to impact the overall water quality over time and if additional measures may be required to ensure compliance with WQG.	Firstly, the dosing of antiscalants will be optimized to minimize the addition of non-reacted antiscalant to the effluent stream. Secondly, any excess and potentially bioavailable antiscalants will report to the pit bottom in the stratified pit lake. While these organic molecules could potentially affect metal biogeochemistry in the hypolimnion, such molecules will be isolated from the lake surface layer and biosphere. Accordingly, potential impacts can be minimized. This topic will be further examined as part of the pit lake research and reclamation program, and operational WTP monitoring.		CSFN	Lorax			GM	Ready for Submission	GM; June 14	Ready for Publishing
844	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Maintaining and Re-establishing Pit Stratification	CSFN (Farzad Mohamm, Rina Freed, et al.)	Lorax Environmental Services Ltd.	Jun 06, 2022	1	New	Recommendation	No	Should pit filling occur before or following full mine buildout, discharges into the pit must be engineered at depth or in such a way that promotes stratification to occur. Recommendation: Please detail the plans to ensure that pit stratification is achieved. Please describe methods to promote stratification. While the methods could be expected to be improved with time, minimum requirements should be defined and required in the permitting to avoid unexpected situations from developing. Closure commitments must be defined to maintain stratification to the extent possible and re-establish stratification if it is lost.	Previous pit lake modelling in the absence of brine addition (Lorax, 2016) showed the development of a meromictic density structure. This reflects the natural tendency of this system to develop a cleaner surface water layer over time in response to pit wall submergence and increase in direct precipitation to pit lake surface. Stratification will only be strengthened by the deposition of brine to the base of the pit lake. Additional details and specifics for the pit lake will be described in response to Provincial EA condition 34, "Closure and Post-Closure Water Quality Management Plan." The plan will be completed prior to the commencement of Operations. The creation and maintenance of the pit lake is best conceptualized and detailed holistically with the suite of Closure and Post-Closure water management strategies. Reference: Lorax Environmental Services Ltd. 2016. Blackwater Gold Project – Pit Lake Model Results Relating to Water Column Stratification and Mixing. Memorandum prepared for New Gold Inc. Prepared by Lorax Environmental Services Ltd. July 27, 2016. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"		CSFN	Lorax			GM	Ready for Submission	GM; June 17	Ready for Publishing
845	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Strategy for Long-term Operation of a Complex Water Treatment Plant	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Recommendation	No	The need for long-term complex water treatment is a concern and not ideal for a mine design. This poses a risk as it is difficult to maintain water treatment long-term in a remote location. A robust strategy is required to maintain complex water treatment long-term. Please include proposed methods to reduce this risk. This is especially important because the treatment process selected for long-term operation involves membrane filtration that has a high risk of fouling. Therefore, to ensure compliance, the plant must be operated under optimal conditions and maintained regularly, which necessitates the development of a robust strategy and plan. Recommendation: Please include a strategy and plan that ensures the long-term operation of the membrane treatment plant is successful.	BW Gold will be required to submit updates to the MDSP and RCP plans every five years at a minimum, which will include water quality model updates. Furthermore, Provincial EA condition 34 requires BW Gold to prepare a Closure and Post-Closure Water Quality Management Plan prior to the commencement of Operations. This plan must be developed in consultation with Indigenous Groups, EMLI, and ENV and submit the plan to EAO for review at the time of planned commencement of operations. The plan must be updated at least every five years from the commencement of operations. This plan must consider mitigations and whether and how the water treatment technology differs from the technology proposed in the EA Application/Environmental Impact Statement. Moreover, Part 10, section 10.1.12 of the Health, Safety and Reclamation Code of Mines in BC (EMLI 2021) requires that a TSF has a water balance and water management plan for permitted life of the mine, prepared by a qualified person. After commencement of operations, the water balance and water management plans must be reconciled annually (Part 10, section 10.4.1). These updates may identify the need for science-based environmental benchmarks (SBEB). As required by EAC Condition 26, SBEBs must be developed in consultation with Indigenous Groups. Furthermore, EAC condition 34 requires development of a closure and post-closure phase WQ management plan, which must be updated every 5 years from the commencement of operations, based on the notion that BW Gold's understanding of the site will change over time and good practice suggests that understanding be used to further optimize plans. The mitigations proposed for construction and operations are described in the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). Section 11 of the MSDP includes a groundwater adaptive management plan and contingency measures actions, which include pumping wells. Closure costs will be assessed by EMLI when it determines the closure bond for the Project. BW Gold has proposed additional closure research projects related to water treatment. These include the use of constructed wetlands for treating water and pit lake amendments to improve water quality in the pit lake.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing

846	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Water Treatment Contingency Plans	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Recommendation	No	Considering that water treatment is required for an extended period post-closure, please include contingency planning for this period to lower the risk of treatment failure/shutdown and non-compliance. These plans and measures can include duplicate installation of critical systems as well as maintaining inventory of spare parts. Recommendation: Develop detailed contingency plans for water treatment post closure. Water treatment is an important aspect of post-closure reclamation and requires contingency planning to ensure success and compliance.	BW Gold will be required to submit updates to the MDSP and RCP plans every five years at a minimum, which will include water quality model updates. Furthermore, Provincial EA condition 34 requires BW Gold to prepare a Closure and Post-Closure Water Quality Management Plan prior to the commencement of Operations. This plan must be developed in consultation with Indigenous Groups, EMLI, and ENV and submit the plan to EAO for review at the time of planned commencement of operations. The plan must be updated at least every five years from the commencement of operations. This plan must consider mitigations and whether and how the water treatment technology differs from the technology proposed in the EA Application/Environmental Impact Statement. Moreover, Part 10, section 10.1.12 of the Health, Safety and Reclamation Code of Mines in BC (EMLI 2021) requires that a TSF has a water balance and water management plan for permitted life of the mine, prepared by a qualified person. After commencement of operations, the water balance and water management plans must be reconciled annually (Part 10, section 10.4.1). These updates may identify the need for science-based environmental benchmarks (SBEB). As required by EAC Condition 26, SBEBs must be developed in consultation with Indigenous Groups. The mitigations proposed for construction and operations are described in the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). Section 11 of the MSDP includes a groundwater adaptive management plan and contingency measures actions, which include pumping wells. Closure costs will be assessed by EMLI when it determines the closure bond for the Project. BW Gold has proposed additional closure research projects related to water treatment. These include the use of constructed wetlands for treating water and pit lake amendments to improve water quality in the pit lake.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
847	Chapter 4 Reclamation and Closure Plan Section # not provided: Management and Treatment of Water and Tailings	Closure of TSFs and Waste Stockpiles	CSFN (Farzad Mohamm, Rina Freed, et al.)	Knight Piésold Ltd. and ERM Consultants Canada Ltd.	Jun 06, 2022	1	New	Recommendation	No	The proposed closure of TSF-C and TSF-D is conceptually described in 3.5.3.15 and Chapter 4. While the concepts described are consistent with what is expected for closure of TSFs, it should be noted that given the stated intention for tailings placed during the final years of mine operation to enable positive draining of tailings beaches, tailings, and waste rock placement in both TSFs must be consistently managed throughout the Life of Mine (LoM) with tailings beaches maintained so that the desired closure configurations reportedly shown in Figure 4.1-5 can be achieved. Recommendation: The validity of the closure concepts proposed for TSF-C and TSF-D can only be realized through preparation of clear guidelines and consistent operations practice. As such, Chapter 3 and 4 should specify that in accordance with the Mines Act and requirements provided by EGBC and the Canadian Dam Association, the details of how the dams will be operated to achieve the described closure configuration will be provided in the operations, maintenance, and surveillance (OMS) documents that will be prepared for each TSF during the early stages of mine operations i.e.., ideally by the end of Year 1 for TSF-C and by end of Year 5 for TSF-D. While Chapter 3 indicates that an OMS document will be prepared, the Application should make an important link between how TSFs are operated and the ability to achieve the closure configurations contemplated.	This comment is acknowledged. The JAIR requires that the Application include a closure concept for the site, including for the TSF. The Health, Safety and Reclamation Code of BC (the Code) requires an update of the reclamation and closure plan at least every five years (section 10.4.1). As such, based on the actual mine development that has occurred during the prior five years, the plan will be updated/revised to reflect any changes to the closure concept for the site, including for the TSF. This process will be repeated throughout the mine life. As the timing for the end of the mine life approaches, additional details will be developed regarding the placement of the final surfaces of the TSF, which will be based on the actual facility configuration at that point in time. The Operations, Maintenance and Surveillance (OMS) Manual for the TSF is required prior to the start of the Operations phase of the TSF (section 10.5.2 of the Code). This will include the items identified in the Code Guidance Document (July 2016) (section 4.4), with reference to the Canadian Dam Association (CDA) Dam Safety Guidelines, as well as the Mining Association of Canada (MAC) 'Developing an Operation, Maintenance and Surveillance Manual for Tailings and Water Management Facilities'. Hence, the Code, under the Mines Act, provides the necessary requirements of the permittee to utilize those organizations that inform on the safe design, operation and closure of a TSF. The TSF has been designed with closure in mind, and through the ongoing updates to the reclamation and closure plan and TSF OMS, adjustments to the closure concept will keep pace as the mine develops.		CSFN	KP	ERM	Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
848	Chapter 4 Reclamation and Closure Plan Section 3.5.4.1	Reclamation Media	CSFN (Farzad Mohamm, Rina Freed, et al.)	Justin Straker, M.Sc, P.Ag Integral Ecology Group and Rolf Schmitt, P Geo. ERM Consultants Canada Ltd..	Jun 06, 2022	1	New	Recommendation	No	Information related to the management and preservation of salvaged overburden for use during progressive of final closure and reclamation is sparse and inconsistently presented in Chapter 4. Recommendation: Section 3.5.4.1 should provide a table that clearly indicates estimated quantities for overburden that will be stripped and a schedule for placement and utilization of these materials. The section should also provide a description of the measures that will be taken to preserve the quality and existence of overburden salvaged for progressive and closure reclamation activities. As this section is currently written, it is likely that overburden materials will be comingled with NAG rock stored in the Lower Waste Stockpile and the Upper Waste Stockpile. Since reclamation media must be of a certain gradation and organic quality, it is recommended that mine planners demonstrate how overburden materials that have been salvaged and considered as sources for final cover soils to be revegetated will be preserved during the LoM. Failure to do this will ensure that as happens at many mines, overburden stockpiles eventually become buried and needed reclamation media becomes increasingly unavailable during the LoM to complete reclamation activities.	Information related to OVB is presented in Chapter 4, primarily Section 4.2.1 (Soil Resources) and the Soil Management Plan (Appendix 9-B). Section 4.2.1.2 (Reclamation-material Demand) describes the volumes estimated to be stripped. Section 4.2.6.1 (Reclamation-materials Stockpiling) and Section 4.2.1.7 (Reclamation-materials Replacement) describe monitoring and best practices for soil stockpiling and replacement. Monitoring, including evaluation against suitability criteria from Section 4.2.1.5 (Reclamation-material Suitability and Salvage), are in place to verify that reclamation materials meet suitability criteria. Stockpile design information is presented in Appendix 3-N (Stockpiles Geotechnical and Water Management Design Report). Material for reclamation will be progressively stripped as the mine is developed and stored in designated locations. In the case of overburden, material stripped over the first 10 years that is not required for construction will be stockpiled in the LWRSF. The remaining overburden stripped from years 11 to 14 will be stored in the UWRSF. Overburden in the LWRSF will be segregated from NAG rock by stockpiling within a designated location of the stockpile footprint. A detailed survey record of the material will be generated to allow the majority to be rehandled for reclamation. A small amount of co-mingling will occur at the contact boundary.		CSFN	IEG	KP		TD	Ready for Submission	RTI June 18	Ready for Publishing
849	Chapter 4 Reclamation and Closure Plan Not Specified	Standalone Reclamation and Closure Plan Required	CSFN (Farzad Mohamm, Rina Freed, et al.)	BW Gold Ltd.	Jun 06, 2022	1	New	Recommendation	No	Source has reviewed Chapter 4 of the Application. A missing appendix to Chapter 4 appears to be the Reclamation and Closure Plan (as a standalone report, not only a chapter of the Application). Please clarify where the RCP is located or if it has been provided. While there is a Chapter (Chapter 4) of the Main Application, proponents are typically required to produce a standalone RCP with appropriate appendices. There are many examples or RCPs for mining projects in BC and the requirements are provided by EMLI Recommendation: Please confirm with EMLI the requirements for the RCP and let the Nations know if more information will be provided in addition to Chapter 4 and the current appendices.	BW Gold understands that the providing the RCP as Chapter 4 meets IRT requirements; no additional stand-alone plan is forthcoming.		CSFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
851	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jun 06, 2022	0			No	Provide cost estimates to address all of the convential reclamation and closure prescriptions described in the plan... Missing.	BW Gold has developed the RLCE following EMLI guidance which includes a comprehensive description of conventional reclamation and closure items, prescriptions and cost estimates as outlined throughout the Memo and accompanying work sheets.	No	LDN/UFN	ERM		Rolf	RT	N/A	N/A	N/A
851	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jun 06, 2022	0			No	Sections 4.11.1 - 4.11.4 do not exist in version C.1? Cost estimates to address all of the conventional reclamation and closures presctiptions must be described within the plan.	BW Gold acknowledges the comment. Methods and sources have been provided in the Project Closure and Reclamation Liability Cost Estimate.	No	LDN/UFN	ERM		Rolf	RT	N/A	N/A	N/A
851	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jun 06, 2022	1	New		No	Unresolved. Sections 4.11.1 - 4.11. of the 2019 JAIR must be included in this plan. Currently, they do not exist and must be added.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
851	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jul 22, 2022	2	Follow up	Information Requirement	No	Please provide a memo that corrects this or a commitment to include in the next iteration of the plan as it is a JAIR.	The final updated Reclamation and Liability Cost Estimate will distinguish conventional reclamation and closure items in the cost estimate.		LDN/UFN	ERM		Rolf		Ready for Submission	AT, Aug 09	Ready for Publishing

852	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jun 06, 2022	0			No	Provide cost estimates to address all of the convential reclamation and closure prescriptions described in the plan... Missing.	BW Gold acknowledges this comment and has provided the cost estimate under a separate cover.	No	LDN/UFN	ERM		Rolf	RT	N/A	N/A	N/A
852	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jun 06, 2022	0			No	Sections 4.11.1 - 4.11.4 do not exist in version C.1? Cost estimates to address all of the conventional reclamation and closures presctiptions must be described within the plan.	BW Gold acknowledges this comment and has provided the cost estimate under a separate cover.	No	LDN/UFN	ERM		Rolf	RT	N/A	N/A	N/A
852	Chapter 4 Reclamation and Closure Plan Section 4.11.1	Conventional Reclamation and Closure	LDN_UFN		Jun 06, 2022	1	New		No	Unresolved. Sections 4.11.1 - 4.11. of the 2019 JAIR must be included in this plan. Currently, they do not exist and must be added.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
853	Chapter 4 4.1 End Land Use and Capability Objectives	End land use goals and wording choice	LDN_UFN		Jun 06, 2022	1	New		No	"The closure and end land use goals for the Project on lands and waters that are disturbed by mine activities are to reclaim ecosystems to achieve an average land and water capability in these areas not less than that existing prior to Project development (see Section 4.1.1, Regulatory Context for more detail)." The phrasing average land and water capability implies that some ecosystems may be left better or worse as long as the average is equal to pre-development conditions. It is understood this wording has been incorporated from Section 10.7.5 of the Code. Despite complication with some habitats (i.e.., wetlands and whitebark pine) BW Gold should consider phrasing that emphasizes that equal to or better ecosystem quality will be the number one priority for all reclamation.	BW Gold appreciates the comment. Owing to challenges in reclamation of post-mine ecosystems (some of which are noted by the reviewer), BW Gold will not be making the suggested change to the RCP language.	No	LDN/UFN	ERM	IEG	Rolf - Peter	RT	Ready for Submission	RT; June 29	Ready for Publishing
853	Chapter 4 4.1 End Land Use and Capability Objectives	End land use goals and wording choice	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	We recognize there are challenges in reclamation of post-mine ecosystems but it is important that you mention the priority of reclaiming ecosystems to equal or better quality post-mine. This recognizes that, yes, it may result in "average" land and water capability, but Artemis will prioritize reclaiming ecosystems to equal or better quality,	Thank you for your comment. BW Gold disagrees with the suggested revision and will not make the change, as this constitutes no substantive change from what "average" means.	No	LDN/UFN	ERM	IEG	Rolf - Peter	RT	Ready for Submission	CB; July 29	Ready for Publishing
853	Chapter 4 4.1 End Land Use and Capability Objectives	End land use goals and wording choice	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	This is not about defining what "average" means, but providing written confirmation that Artemis will strive to leave better quality ecosystems than what was previously found. Given the massive impacts the mine will have on Tradittional Lands for generations it is not an unreasonable ask to leave it better than before the project. Wording is not committing to actually achieving it, but instead committing to trying your absolute best for a better end product as compensation for the effects it caused. These lands are important to the Nations and should be treated as such by the proponent.	BW Gold appreciates the continued discussion on this topic. We reiterate that it is important to acknowledge the challenges in reclamation of post-mine ecosystems as the reviewer continues to note, and will not be making wording changes to commit to an end reclamation state that "guarantees a better end product" as "compensation" for mining effects. There are other "offsetting" plans such as the fish offsetting plan. BW Gold has outlined the ongoing process of reclamation research, updates to ecohydrological modelling and commits to update management plans including the RCP. We sincerely believe that the combination of these collaborative efforts and learnings by all parties through LOM will prepare for a successful reclamation end product.		LDN/UFN	ERM	IEG	Rolf - Peter	TD	Ready for Submission	TD, Sept 14	Ready for Publishing
854	Chapter 4 4.1.2.2 Post-mine Land Capability	Typo	LDN_UFN		Jun 06, 2022	1	New		No	As discussed in Section 4.2.1, Soil Resources, thtree groups of reclamation materials have been identified for reclamation: glaciofluvial surface soil and mixed-mineral surface soil (i.e.., non-glaciofluvial mineral soils), and organic surface soil.	The comment is acknowledged, however the application is not being updated at this time.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 25	Ready for Publishing
855	Chapter 4 4.2.5.2 Whitebark Pine	Local opportunities	LDN_UFN		Jun 06, 2022	1	New		No	"A whitebark pine nursery will be established either on the mine site or in one of the nearby communities to grow seed collected from the local area and adapted to local climatic conditions. These seedlings will be used in reclamation planting. The location of the nursery has not yet been confirmed." This is an opportunity to develop a nursery which is located and run by a local community. This could create a long-term business opportunity for the community after BW Gold is closed and reclaimed. This option should be explored in preference to a BW Gold run nursery.	The comment is acknowledged.	No	LDN/UFN	ERM		Ben	RT	Ready for Submission	RT; June 29	Ready for Publishing
855	Chapter 4 4.2.5.2 Whitebark Pine	Local opportunities	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please provide some detail or update on how this will be considered and reasons for not pursuing it, if applicable.	BW Gold is interested in hearing more about the Nations' interest in a nursery business, however this discussion is beyond the scope of the Joint Application.	No	LDN/UFN	ERM		Ben	RT		RT; Aug. 14	Ready for Publishing
856	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 25a: "a definition and description of the pre-mining land and water capability and land and water use conditions, using maps and tabular inventories, with respect to ecosystems and habitats and other uses in the area of the Project Area disturbances;" Pre-mine aquatic ecosystem capability is referenced in Chapter 2, however this is not part of the EAO process and must be included within this plan to meet the condition. There is no table or map used to define/describe the pre-mining water capability.	Thank you for your response - the requirements of the EAC condition are beyond the scope of the joint application review. However, the feedback is appreciated and will be used to inform future updated to the EAC condition 25 plan.	No	LDN/UFN	ERM		Ben	RT	Ready for Submission	RT; June 29	Ready for Publishing

857	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 25b: "a definition and description of the predicted post-closure land and water capability and land and water use conditions" Similarly to above, very little is mentioned for post-closure water capability within this plan. Additionally, elaboration on the predicted post-closure land and water capability and land and water use conditions with respect to ability to exercise Aboriginal Interests needs to be included.	Thank you for your response - the requirements of the EAC condition is beyond the scope of the joint application review. However, the feedback is appreciated and BW Gold wishes to point the reader to the following information within the joint application: It is noted that this current gap in understanding as it relates to water capability is understood, as discussed in Section 4.7.11 with reference to riparian units: "As watercourses such as diversions and collection ditches are constructed and hydrologic characteristics understood, riparian revegetation prescriptions (Table 4.2-7) can be adapted for use in reclamation of these features. The species assemblages supported by riparian areas are dependent upon channel morphology and seasonality of water flow, with the width of effective riparian areas for revegetation purposes also being influenced by lateral seepage patterns. For these reasons, watercourses have not been explicitly mapped as revegetation units in Figure 3.3-15 in Chapter 3, Mine Plan at this stage of closure planning. Updated mapping of riparian areas will be conducted closer to closure, with reclamation prescriptions refined in consultation with appropriate groups." Land and water use conditions are further discussed in Section 4.1.3: "This holistic approach is highlighted in Table 4.1-5, which compares and contrasts pre-mining ecosystems with projected post-mining ecosystems in regards to BGC unit, site series, SMR/SNR, area (ha), representative species, community members, key habitat features and vegetation species, focal reclamation species, expected species present at different stages of habitat regeneration, where that regeneration is expected to occur on the closed mine site and applicable reclamation research."	/TD to revie	LDN/UFN	ERM		Rolf?	RT	Ready for Submission	RT: June 28	Ready for Publishing
858	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 25e: "incorporation of mitigation targets related to valued components examined in the Application, including but not limited to wildlife and wildlife habitat, vegetation, and ecosystems, and monitoring for those targets" Mitigation targets related to valued components are not described in this plan. There is also no reference to a section where this might be included within the Table of Concordance (Appendix 4-A).	Mitigation targets are described in Appendix B (with a focus on Table 2). This reference will be added in the Table of Concordance, and the title of the appendix will be updated to include Vegetation (it will read: Reclamation and Closure Planning for Wildlife and Vegetation). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
859	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Section 4.2.7 should take into consideration the WMMP as well, as per condition 25f. The section references in the table of concordance do not match up with target sections in the plan. E.g. Section 4.9.5 does not exist.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions.	/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
860	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 2c: "names and, if applicable, professional certifications and professional stamps/seals, of those responsible for the preparation of the plan, program, or other document;" This is missing.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions.	/TD to revie	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
861	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Section 12 does not address condition 2e as noted in the concordance table (Appendix 4A). The means by which the effectiveness of the mitigation measures will be evaluated including the schedule for evaluating effectiveness needs to be included. Mitigation measures are briefly mentioned in Table 4.13-1, however the means by which their effectiveness will be evaluated + the schedule for evaluating effectiveness is not discussed.	Condition 2 is in reference to all plans and not all of the sub-conditions relate to each plan. As noted in the Table of Concordance, there are no mitigation measures in the ELUP (instead, there are reclamation objectives). The intent of the ELUP is to reclaim areas that could not be protected through mitigation during construction/operations and were disturbed.	No	LDN/UFN	ERM		Valerie/Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
862	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3d: "The adaptive management in the plan must include at least the following: d) the monitoring program that will be used including methods, location, frequency, timing and duration of the monitoring" Section 4.10.1.1 (Surface Water Quantity and Quality) mentions monitoring locations and frequency will stay the same as in the AEMP. However, methods, timing, nor duration is mentioned. Additionally, Chapter 5 is referenced, however this is not	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
863	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3d: "The adaptive management in the plan must include at least the following: d) the monitoring program that will be used including methods, location, frequency, timing and duration of the monitoring" Groundwater quantity and quality monitoring does not specify timing for sampling.	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
864	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3d: "The adaptive management in the plan must include at least the following: d) the monitoring program that will be used including methods, location, frequency, timing and duration of the monitoring" Geothechnical stability monitoring section is lacking detail required for monitoring program (e.g. methods, location, frequency, timing, duration). The OMS manual is referenced to include some of this information but is not included in the EAO application.	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
865	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3d: "The adaptive management in the plan must include at least the following: d) the monitoring program that will be used including methods, location, frequency, timing and duration of the monitoring" ML/ARD monitoring section does not include required details to meet condition 3d. MSDP is referenced but not part of the EAO process.	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
866	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3d: "The adaptive management in the plan must include at least the following: d) the monitoring program that will be used including methods, location, frequency, timing and duration of the monitoring" Reclamation monitoring (Section 4.10.5) subsections need to include more detail (see above comments). Plans may be referenced for more information, but must be included in the EAO process application in order to meet conditions.	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
867	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3e: "the baseline information that will be used, or collected where existing baseline information is insufficient, to support the monitoring program" Any mention of baseline information references Chapter 2. This chapter is not an included document in the EAO process, therefore cannot be referenced to meet the EAC Conditions.	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing

868	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3g: "the identification of qualitative and quantitative triggers, which, when observed through monitoring required under paragraph d), will require the Holder to alter existing, or develop new, mitigation measures to avoid, reduce, and/or remediate effects" and condition 3h: "the methods that will be applied to detect when a numeric trigger, or type or level of change referred to in paragraph	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	T/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
869	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3i: "a description of the process for and timing to alter existing mitigation measures or develop new mitigation measures to reduce or avoid effects;" not met.	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	T/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
870	End Land Use Plan General	Compliance	LDN_UFN		Jun 06, 2022	1	New		No	Condition 3j, 3k, and 3l are not met, also due to there being no mention of identifying new/altered mitigation measures or the process for establishing them and the process to monitor and report on them (see previous comment).	Condition 3 does not apply to the ELUP, as the ELUP does not include a monitoring component.	T/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 27	Ready for Publishing
871	Chapter 4 Reclamation and Closure Plan Section 4.7.5	Watercourse Reclamation Prescriptions	LDN_UFN		Jun 06, 2022	1	New		No	Provide details on mine site water management and the re-establishment of watercourses post-mining... Included, but under a different name and 4 subsections. Refer to the table of concordance for the Joint Mines Act/Environmental Management Act Application Information Requirements for specific sections in Chapter 4 applicable to watercourse reclamation	The following lists the requirements of Section 4.7.5 and the location in Chapter 4: 4.7.5 [*Provide details on mine site water management and the re-establishment*...]: In a future iteration of the Reclamation and Closure Plan, the watercourse reclamation prescriptions will refer to Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). The MSDP provides a detailed mine site water management and describes water sources that will be potentially affected by ML/ARD and other mine effluents, and how contact water will be collected and treated to meet discharge water quality criteria	Yes	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 27	Ready for Publishing
872	Chapter 4 Reclamation and Closure Plan Section 4.7.5	Watercourse Reclamation Prescriptions	LDN_UFN		Jun 06, 2022	1	New		No	The one section referenced in 4.7.11 does not fully address the requirements of 4.7.5 in the JAIR Guidance Document. As indicated in Section 4.7.11, "watercourses have not been explicitly mapped as revegetation units in Figure 4.1-5 at this stage of closure planning. Updated mapping of riparian areas will be conducted closer to closure, with reclamation prescriptions refined in consultation with appropriate groups."	The Section 4.7.5 Joint Mines Act/Environmental Management Act Application Information Requirements (JAIR) are covered in several separate sections of Chapter 4 (see response to Comment #871). Table 4.2-7 (Vegetation Prescriptions for Projected Post-closure Ecosystems) of Chapter 4 provides vegetation prescriptions for riparian areas of watercourses to be reclaimed. As required by the JAIR, the practices to be implemented for watercourse restoration are provided in Section 4.7.11 of Chapter 4. Ongoing reclamation research (Section 4.2.5, Reclamation Research) and monitoring will inform refinement of detailed prescriptions over the life of mine. As stated in Section 4.2.5.1, riparian species will be tested separately. Riparian species will also be monitored through the Wetlands Management and Offsetting Plan with offsetting work happening at Mathews Creek. The grass/shrub ecosystem on dams is also not included in a specific trial, but results from seed mix development for erosion control will inform reclamation of this ecosystem type. Results of non-tree plant species tested in the vegetation trials will also inform revegetation of dams.	T/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 27	Ready for Publishing
873	Chapter 4 Reclamation and Closure Plan Section 4.7.5	Watercourse Reclamation Prescriptions	LDN_UFN		Jun 06, 2022	1	New		No	Data has not been provided.	See response to Comment ID#872. The reclamation and closure prescriptions described in Section 4.7 of Chapter 4 have been developed in accordance with Section 10 of the Code to support the end land uses described in Section 4.1, End Land Use and Capability Objectives. Cover designs and planned ecosystems have been developed through ecohydrological modelling (Section 4.1, End Land Use and Capability Objectives; Section 4.2.1, Soil Resources; Section 4.2.3, Revegetation Strategy).	T/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 27	Ready for Publishing
874	Chapter 4 Reclamation and Closure Plan Page 4-2	Area of disturbance	LDN_UFN		Jun 06, 2022	1	New		No	You say the total area of disturbance is expected to be 2200 ha, you need to define disturbance here. I assume this is the area of habitat destruction, as the footprint alone suggests that over 8360 ha will be 'Disturbed'.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 20-Jun	Ready for Publishing
874	Chapter 4 Reclamation and Closure Plan Page 4-2	Area of disturbance	LDN_UFN		Jul 27, 2022	2	Follow Up	Comment	No	The response provided by Artemis for this comment does not adequately address what the reviewer is asking. Please revisit original comment and provide a detailed response for clarification.	BW Gold acknowledges that the use of the term "disturbance" can sometimes be confusing. The Mines Act permit application refers to "disturbance area" as noted on page 4-2, which is an area within which the company seeks to undertake approved activities (which could be an entire range of activities ranging from clearing vegetation through to building construction, etc.). The area approved for disturbance may not be entirely disturbed at the same level of intensity, and invariably some habitat elements are likely to remain. The Mines Act permit area will be larger than the actual area of disturbance to provide for some flexibility at the component siting stage, but should not exceed the EAC CPD area. The detailed breakdown of disturbance areas in Table 4.1-4 provides detail on types of disturbance by ecosystem area arranged by BGC unit.	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	AT, Aug 09	Ready for Publishing
874	Chapter 4 Reclamation and Closure Plan Page 4-2	Area of disturbance	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	Table 4.1-4 does not list the total disturbance of an area, but instead indicates BGC area pre- and post-mine operations. This does not answer the original question of describing what 2,200 ha of disburance is in reference to page 4-2. Requesting information that breaks down how the number 2,200 was calculated.	Page 4-2, Section 4 of the RCP states: "The proposed disturbance associated with this Application is approximately 2200 hecatares (ha)." BW Gold current analysis which informs the Reclamation and Liability Cost Estimate includes the following areas (all numbers in hectares as calculated from ArcGIS) which total 2039 hectares: Borrow Areas - 85.9; Laydown areas - 2.1; Open Pit - 226.9; Plant Site - 6.0; Roads and Linear structures - 46.5; Stockpiles - 421.0; Tailings Storage Faciltiy - 1185.4; Water Management Structures - 10.8; Water Treatment Plants - 0.7; Ancillary Facilities - 24.9; Crossings - 8.0; Plant Site - 21.3. An annual reconciliation of actual mine site disturbance will be required to be reported yearly in the Annual Reclamation Report.		LDN/UFN	ERM		Rolf		14-Sep-22		Ready for Publishing
875	Chapter 4 Reclamation and Closure Plan Figure 4.1-2:	Explanation	LDN_UFN		Jun 06, 2022	1	New		No	With all of these figures it would be helpful to either define the abbreviations on the figure or in a sentence below the figure as moving back and forth to the table is difficult and remembering all the abbreviations more so.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
876	Chapter 4 Reclamation and Closure Plan table 4.1-2:	Accuracy	LDN_UFN		Jun 06, 2022	1	New		No	As BW Gold has not yet done a full assessment of wetland areas in the footprint I assume this table and the details regarding wetland area needs to be updated after 2022 baseline surveys are completed. This should be mentioned somewhere for the sake of clarity.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing

877	Chapter 4 Reclamation and Closure Plan Page 4-16	Optimistic prediction considering climate changes	LDN_UFN		Jun 06, 2022	1	New		No	The increase in the total area of submesic or drier ecosystems in the ESSFmv1 will favour lower tree densities and drought-tolerant tree species such as whitebark pine (Pinus albicaulis), particularly where coarse-textured glaciofluvial surface soils are used for reclamation (Section 4.2.1). I realize there is uncertainty but this seems optimistic considering the climate change predictions you present on page 4-26 which will most likely decrease whitebark pine suitability across the whole site. Best if you refer to the research trials that are going to be carried out to test success of WP at lower elevations.	Agreed. Updates to reflect this will be made in the next version of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	IEG			TD	Ready for Submission	RT; June 18	Ready for Publishing
878	Chapter 4 Reclamation and Closure Plan Page 4-71	Caribou section needs updating according to the CMMP	LDN_UFN		Jun 06, 2022	1	New		No	Recent Negotiations between LDN, UFN, ECCC and BC have concluded the mine will have a significant effect on the recovery of Caribou, the result of this are significant new measures to offset the mines impact through restoration and habitat securement. The caribou information claiming no impact on this page is therefore wrong and needs updating based on the CMMP. The ratios used and the type of offsetting described also needs updating.	BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	ERM		Greg/Hanna h	RT	Ready for Submission	RT: June 24	Ready for Publishing
878	Chapter 4 Reclamation and Closure Plan Page 4-71	Caribou section needs updating according to the CMMP	LDN_UFN		Jul 28, 2022	2	Follow Up	Comment	No	Please ensure this update is included in the next iteration of Chapter 4.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
879	Chapter 4 Reclamation and Closure Plan General comment	Biological characteristics of the site	LDN_UFN		Jun 06, 2022	1	New		No	Although not a requirement and perhaps something that is done further down the line, a paragraph describing how the biological structure of the site will be mapped and used in restoration planning would add value to the plan. The remaining biological components of the site such as small tree groves, ponds, wetlands, CWD etc..., will act as the matrix providing a background structure that can be built upon. It will provide site variation by providing old habitat next to new, provide a matrix that animals can connect and disperse into the site and provide key habitats not available in newly restored areas, such as nesting, roosting, cover, denning and other key habitat features. This knowledge and mapping should be built up as the mine progresses and will make restoration planning easier and more effective.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
880	Chapter 4 Reclamation and Closure Plan General comment	Land capacity	LDN_UFN		Jun 06, 2022	1	New		No	No reflection on how "no less than average pre-disturbances land capacity" can be achieved with considerably drier and less heterogenous landbase in the closure landscape.	Table 4.1-4 compares pre-mining and post-closure ecosystems, with some ecosystems gaining area in the post-closure landscape and some losing area. Drier ecosystems have greater capability for supporting some species and associated land uses, and lesser capability for supporting other species and land uses. Thus, it is difficult to make the average-capability comparison without selecting a species or land use on which the comparison will be based. Some might have higher post-closure capability, and some may have lesser capability.	No	LDN/UFN	IEG	ERM		TD	Ready for Submission	RT; June 18	Ready for Publishing
881	Chapter 9.1 EMS	Concordance with Section 9.1 of the 2019 Joint Application Information Requirements	LDN_UFN		Jun 06, 2022	0			No	"information on environmental standards and procedures, including all applicable sector-specific standards, guidelines, best management practices, and codes of practice (e.g., Responsible Care, CSA, ASTM, RISC, GWPR);" Joint Requirements asks for a comprehensive list - authors go on to provide a "not exhaustive list". Plus many of the references are incorrect or do not exist (e.g., Section 9.1.1.4)	The list of legislation, regulations, guidance and best management practices has been expanded and references checked.	No	LDN/UFN	ERM			RT	N/A		N/A
881	Chapter 9.1 EMS	Concordance with Section 9.1 of the 2019 Joint Application Information Requirements	LDN_UFN		Jun 06, 2022	1	New		No	"This list is not exhaustive given the number and range of guidance documents." The list is still not exhaustive, it's clear there are many documents but maybe these could be provided in an appendum to meet the requirement of having "all applicable sector-specific standards, guidelines, best management practices," etc.....?	The non-exhaustive list provided in Section 9.1 is meant to be a summary (an objective of Section 9.1) and avoid the potential for duplication error and requirement to update Section 9.1 each time an update is made to each management plan. In addition BW Gold took the approach to provide applicable exhaustive lists in each management plan because it facilitates implementation. BW Gold recognizes that the Application contains some omissions and will provide a memo that corrects them. With respect to Section 9.1 and future iterations of the Environmental Management System, the section of each management plan that provides the complete list of 'Compliance Obligations, Guidelines, and Best Management Practices' will be provided instead e.g., Section 4 of the Invasive Plant Management Plan.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
881	Chapter 9.1 EMS	Concordance with Section 9.1 of the 2019 Joint Application Information Requirements	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Given that the intention of the EMS is to summarize all management plans, "The Environmental Management System (EMS) provides the framework to organize and guide activities during all phases of the mine and to ensure orderly, safe, compliant, and environmentally and socially responsible operations at the mine.", all legislation, regulations, guidance and best management practices should be included here. We disagree that simply including them in each management plan is sufficient or meets the requirement of having "all applicable...".	The non-exhaustive list provided in Section 9.1 is meant to be a summary (an objective of Section 9.1) to avoid the potential for duplication error and requirement to update Section 9.1 each time an update is made to each management plan. BW Gold took the approach to provide applicable exhaustive lists in each applicable management plan because it facilitates implementation (highlighting the legislation etc.. where it is most relevant). In future iterations of the Environmental Management System, the list in Section 9.1 will be replaced with a cross reference to the section of each management plan that outlines the complete list (e.g., see Section 4 of the Invasive Plant Management Plan [...]).		LDN/UFN	ERM		Tonia		Ready for Submission	AT, Aug 09	Ready for Publishing
882	Chapter 9.1 EMS	Standards and Guidelines	LDN_UFN		Jun 06, 2022	0			No	Typo: "Federal and provincial environmental standards and guidelines that may apply to the Blackwater Project include (note: this list is not exhaustive list given the number and range of guidance documents, ordered from oldest to most recent):"	The statement has been revised as follows: "This list is not intended to be an exhaustive list given the number and range of guidance documents. In addition, the guidance documents listed may be updated from time to time. BW Gold will stay current on federal and provincial guidance and will consider and apply, where appropriate, other guidelines and standards recommended by Indigenous groups, regulators, and other interested parties as they may relate to the Project."	/TD to revie	LDN/UFN	ERM		Valerie	RT	N/A		N/A
882	Chapter 9.1 EMS	Standards and Guidelines	LDN_UFN		Jun 06, 2022	1	New		No	"BW Gold will stay current on federal and provincial guidance and will consider and apply, where appropriate, other guidelines and standards recommended by Indigenous groups, regulators, and other interested parties as they may relate to the Project." This sentence is not included as noted.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	/TD to revie	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing

882	Chapter 9.1 EMS	Standards and Guidelines	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	It is our understanding that chapter 9 plans will be updated, we cannot mark this comment as resolved until we see an updated management plan (9.1).	BWG recognizes that various management plans may need updates as a result of permitting reviews. BWG will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
883	Chapter 9.1 EMS	Environmental Management System	LDN_UFN		Jun 06, 2022	1	New		No	"The MPs appended to this chapter are identified in **Table 9-1-1** and described in Section 9.2." Correct to Table 9.1-1.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
883	Chapter 9.1 EMS	Environmental Management System	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	It is our understanding that chapter 9 plans will be updated, we cannot mark this comment as resolved until we see an updated management plan (9.1).	BWG recognizes that various management plans may need updates as a result of permitting reviews. BWG will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia	RT	Ready for Submission	AT, Aug 09	Ready for Publishing
884	Chapter 9.1 EMS	Legislation	LDN_UFN		Jun 06, 2022	1	New		No	"Prohibits deposition of substances that are harmful to migratory birds in waters or in an area frequented by migratory birds and disturbance or destruction of migratory bird nests or shelters." Migratory birds convention act also contains regulations to protect migratory birds and their eggs from disturbance (not only nests). Please include this for clarity.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Greg/Hannah	RT	Ready for Submission		Ready for Publishing
884	Chapter 9.1 EMS	Legislation	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	It is our understanding that chapter 9 plans will be updated, we cannot mark this comment as resolved until we see an updated management plan (9.1).	BWG recognizes that various management plans may need updates as a result of permitting reviews. BWG will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Greg/Hannah	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
885	Chapter 9.1 EMS	Training	LDN_UFN		Jun 06, 2022	1	New		No	"Records which demonstrate the required competency and completed training will be retained on file at the mine site." How will "required competency" be measured/ensured? Other than just having completed the training?	The type of training competency will depend on the training program/materials. For some programs competency may be measured with a quiz at the end of a training module, and others it will be completion of a self-assessment, or a post-training assessment of how well employees are performing job-skills.	Yes	LDN/UFN	ERM	BWG	Valerie	RT	Ready for Submission	RT: June 26	Ready for Publishing
886	Chapter 9.1 EMS	Training	LDN_UFN		Jun 06, 2022	1	New		No	"Training and awareness programs will be periodically evaluated for their effectiveness." How often is "periodically"? How will effectiveness be measured?	The review of training programs will be dependent on changes in training needs and regulatory requirements. Effectiveness of programs will be an assessment against training program-specific performance standards. For example, the wildlife monitoring results will be reviewed annually to determine if a habituated animal is observed or there are wildlife incidents or interactions.	Yes	LDN/UFN	BWG		Travis	TD	Ready for Submission	RT: June 26	Ready for Publishing
887	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Communication Objective Missing from MERP: In the event of a mine emergency, and after safety and immediate mitigation measures have been secured, a critical goal of the MERP must be to communicate with Blackwater Gold's Indigenous partners. The nations have an expectation that the MERP, and specifically the Accidents and Malfunctions Communication Plan (AMCP) will: • provide timely, factual, and official information to the nation representatives and Chiefs, according to	The Mine Emergency Response Plan (MERP) outlines BW Gold's commitments and protocols in the event of an emergency and will continue to refer to the Accidents and Malfunctions Administration and Communication Plan (AMCP; Appendix B of the MERP). An objective of the ACMP is to "Set out the process for identifying and providing opportunities to Indigenous groups, nearby residents and local communities or other user groups to assist in accident or malfunction response". Table 7-1 in Section 7 of the AMCP summarizes the communication protocol based on the consequence level of an accident and malfunction.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	TD, Jun 29	Ready for Publishing
888	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Response Action Plans: The MERP acknowledges that not every emergency can be planned for. However, there are some emergencies that should be considered more likely to occur at a mine site and require an action plan. Blackwater has proposed the following: • Medical emergencies • Building or equipment fire • Ground movement or slope failure within Open Pit • Stockpile slope failure • Spill or incident involving fuel, chemical or hazardous material including cyanide • Vehicle roll-over or collision • Release of contaminant to fish-bearing water • Major power outage The Nations would also like the following action plans developed and included in the MERP: • Dam Breach Inundation Response Plan • Water Treatment Plant Failure or Shutdown Recommendation: A dam breach scenario or water treatment failure could have wide ranging impacts to human life, wildlife and aquatic life. Ensure that there are specific action response plans developed in conjunction with Blackwater Gold's Indigenous partners that consider the harvesters and hunters using the land surrounding the mine site.	The Accidents and Malfunctions Administration and Communication Plan (AMCP) provides a set of responses for accidents or malfunctions that include a dam breach or water treatment plant failure or shutdown (EAC Condition #36 or Appendix B of the Mine Emergency Response Plan; MERP). Both of the examples provided by the reviewer are more applicable to the AMCP and will not be added to the list in of emergencies in the MERP. A typical set of responses for the category of accident or malfunction listed. The responses will be developed by the Mine Manager and mine management team, Indigenous nations, agencies and other potentially affected interests (harvesters and hunters using the land). The ACMP was provided to regulators and Indigenous nations as defined in the Project's Environmental Assessment Certificate #M19-01 for review on November 15, 2021, December 29, 2021 and in April 2022 (as Appendix B of the MERP). The ACMP was also approved for implementation by EAO in a letter received by BW Gold on Feb 18, 2022.	'TD to revie	LDN/UFN	ERM		Michelle	RT	Ready for Submission	TD, Jun 29	Ready for Publishing
889	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Risk Matrix and the Nation's Valued Components: Figure 4.4-3 titled Risk Matrix outlines the different types of impacts to be considered during an emergency event. The level of response depends on correctly identifying the consequence or effect of an impact. Please discuss if there are any specific Valued Components for the Nations, for example, archaeological or cultural heritage sites identified during the Environmental Assessment that should explicitly be considered at a higher consequence rating in the risk matrix. Communication protocols	The Mine Emergency Response Plan is focused on health and safety-related mine emergencies. The risk matrix provided in the Accidents and Malfunctions Administration and Communication Plan (AMCP; Appendix B of the MERP) is applicable to Indigenous nations valued components. However, the level of response provided in the AMCP Table 2.2-3 (Accidents and Malfunctions Summary of Risk, Mitigation and Response Measures) is based on consequence, not the overall risk sum. The definitions for likelihood and consequence were adapted from the Environmental Assessment (EA; New Gold 2015) and considers valued components	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	TD, Jun 29	Ready for Publishing
890	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Training for the Nations' Employees and Community Members: Blackwater Gold will provide MERP and first aid training to all employees and will offer additional First Responder training/refresher courses. The Nation's employees may also hold First Responder roles within their community and their capacity would complement the needs of Blackwater Gold. Please ensure that Nation employees are actively encouraged to become part of the mine rescue team and	This recommendation will be added to Section 16.1. BW Gold also wishes to note that Indigenous employees have volunteered and have been trained as part of the Blackwater Mine Rescue Team. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing

891	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Mine Rescue Plan and Equipment: Section 14 of the MERP identifies three main categories for mine rescue planning and equipment: firefighting, site security and public safety. Considering that the Blackwater project utilizes cyanide reagent as a major consumable for mining and metallurgical activities, it is paramount that the mine rescue plans consider and adequately address the requirements for situations where there is a risk of exposure to cyanide. Recommendations: Include cyanide incidents as a category in the mine rescue plan, including discussion of proper response and equipment required for situations where mine rescue activities may involve exposure to cyanide. This should include discussion of specialized training for members of the rescue team as well as the necessary equipment, monitoring and maintenance and inspection requirements for emergency rescue equipment.	For consistency with the Cyanide Management Plan (Appendix 9-M), cyanide release and exposure will be added to the list of Response Plans (Section 10 of the Mine Rescue Plan and Equipment) that will be developed prior to having cyanide at the site. Section 9 of the Cyanide Management Plan details the requirements of the Cyanide Emergency Response Plan including personnel and stakeholder involvement, equipment and resources, notification procedures, monitoring elements and response plan evaluation. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
892	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Joint Investigations and Reporting: After an emergency response, an investigation is launched by the Emergency Response Coordinator and Blackwater Gold management to determine the cause and any required modifications to the response plan. The Nations' Aboriginal Monitors should also be included in the joint investigation and all reporting should be provided to nation representatives. Investigation and reporting measures are important accountability tools that maintain the confidence and trust of nation communities. Recommendation: Ensure that Aboriginal Monitors are included in incident investigations and that all reporting/record keeping provided to government agencies are concurrently provided to Nation representatives.	Thank you for the recommendation. We will track all edits and incorporate this text to Section 18 and 19.1.6 in next iteration of the plan, toward the end of the Application Review process. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
893	Mine Emergency Response Plan - MERP (May 2021)		LDN_UFN		Jun 06, 2022	1	New		Yes	Accidents and Malfunctions Communications Plan: The Accidents and Malfunctions Communications Plan will be developed and operate in tandem with the MERP. Communication to Nation members in the event of a mine emergency is critical in preventing loss of life and evaluating potential impacts to rights and interests. Many mines in Canada overlook the importance of this communication and erode important partnerships with their Indigenous hosts by communicating information late or without transparency. It is the Nation's expectation that an Accident and Malfunctions Communications Plan will include the following general	The template referenced in the reviewer's comments has been incorporated into the Accidents and Malfunctions Communications Plan (see Table 7-1).	T/TD to revie	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
894	MERP	Typo	LDN_UFN		Jun 06, 2022	1	New		No	"Imminent control of the hazard is probable but there is a chance of threat to public and/or the environment" There are some spacing typos in response sections for Level 1 and Level 2.	BW Gold acknowledges the comment and will correct the typos for the next update to the MERP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission		Ready for Publishing
894	MERP	Typo	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
895	MERP	Reference	LDN_UFN		Jun 06, 2022	1	New		No	Section 5.6 could benefit from a reference to where more information on the MRT can be found within the plan (e.g. Section 14)	BW Gold acknowledges the recommendations for the next update to the MERP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission		Ready for Publishing
895	MERP	Typo	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
896	MERP	Content	LDN_UFN		Jun 06, 2022	1	New		No	What is considered a "regular basis"? Please be more specific if possible.	BW Gold acknowledges the recommendations for the next update to the MERP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission		Ready for Publishing
896	MERP	Typo	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
897	MERP	Typo	LDN_UFN		Jun 06, 2022	1	New		No	TELUS network coverage	BW Gold acknowledges the comment and will correct the typos for the next update to the MERP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission		Ready for Publishing
897	MERP	Typo	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
898	MERP	Content	LDN_UFN		Jun 06, 2022	1	New		No	When will the final MERP be provided? Quite a few sections are said to be provided in the "final MERP prior to Construction" but will need to be reviewed as well. Something like section 16.3.2.4 should have all the necessary information to create a communication plan already.	The timing cannot yet be defined, because BW Gold recognizes that management plans may need various updates as a result of the permitting process. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 27	Ready for Publishing
898	MERP	Content	LDN_UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and the above mentioned updates are included in the updated management plan (i.e., information is provided that was mentioned to be included in the "final MERP prior to construction".	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
899	MERP	Acronym	LDN_UFN		Jun 06, 2022	1	New		No	"Use JHA, NRHTA, and FLRA cards as a part of daily work planning to control risks on the job" Please define these acronyms at first mention in text.	The acronyms referred to in the comment are in the BW Gold Management System Procedure MSP 01. The definitions are provided to employees. BW Gold acknowledges the comment and will consider updates in the next revision of the document. For reference, a JHA is a Job Hazard Analysis, a NRHTA is a Non Routine Hazardous Task Assessment, and a FLRA is a Field Level Risk Assessment.	No	LDN/UFN	BWG		Jesse	TD	Ready for Submission	RT: June 24	Ready for Publishing

900	Chapter 1 - 1.3.5	Mine Components and Off-Site Infrastructure	LDN_UFN		Jun 06, 2022	0			No	"Include associated detailed maps of the key mine components and on-site infrastructure". Most features included in Figure 1.1-2, but missing some components like detailed layout of ancillary buildings and processing facilities, explosive facilities, etc..	Section 1.3.4 of the JAIR requires detailed maps of key components and on-site infrastructure. Figures will be reviewed and updated to include key components.	No	LDN/UFN	ERM		Jesse	RT	Ready for Submission	RT: June 24	Ready for Publishing
900	Chapter 1 - 1.3.5	Mine Components and Off-Site Infrastructure	LDN_UFN		Jun 06, 2022	1	New		No	In progress?	BW Gold acknowledges the comment. Detailed maps with all components and on-site infrastructure are provided in Chapter 3 of the Application.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission		Ready for Publishing
901	Chapter 1 - General	General References	LDN UFN		Jun 06, 2022	0			No	More consistency needed for in-text reference comma use (e.g. Andrew Leach & Associates, 2008 vs. Andrew Leach & Associates 2008)	Citations have been revised to not have a comma after the author (e.g., Andrew Leach & Associates 2008)	No	LDN/UFN	ERM		Tonia	RT	N/A		N/A
901	Chapter 1 - General	General References	LDN UFN		Jun 06, 2022	1	New		No	Reference no longer found anywhere in text but still included in reference list.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
902	Chapter 1 Introduction and Project Overview - Section 1.3.7	Spatial Data	LDN_UFN		Jun 06, 2022	0			No	Reclamation proposed annually over the next 5 years. Spatial data required: reclamation proposed annually over the next 5 years. The RCP does not outline reclamation annually over the next five years.	Section 4.8 (Detailed Five Year Mine Reclamation Plan) describes the annual reclamation plan over the next 5 years as follows: Section 4.8.1 (Y-2), Section 4.8.2 (Y-1), Section 4.8.3 (Y+1), Section 4.8.4 (Y+2) and Section 4.8.5 (Y+3). Each section describes areas of disturbance and reclamation-related activities, such as soil salvage and stockpiling, vegetation clearing and stockpiling woody debris. Spatial data is not included with the descriptions in Section 4.8, because this is data will be largely based on the actual construction and the areas of disturbance. Consequently, spatial data will be summarized in annual reclamation reports. The Reclamation and Closure Plan notes that the opportunity for reclamation activities during the initial construction and operations in the first 5 year detailed Mine Plan are quite limited. However, all activities anticipated to be minor and spatial summaries will be summarized in the Annual Reclamation Reports as a condition of the Mines Act permit. Furthermore, reclamation research trials are detailed in Table 4.2-8: Uncertainties and Approaches for Addressing and Table 4.2-9: Revegetation and Cover Research Trial Site Characteristics with some of the trials available to start in year -2.	No	LDN/UFN	ERM		Jesse	RT	N/A		N/A
902	Chapter 1 Introduction and Project Overview - Section 1.3.7	Spatial Data	LDN_UFN		Jun 06, 2022	0			No	Spatial data has not been added for review as required. Spatial data required: reclamation proposed annually over the next 5 years. The RCP does not outline reclamation annually over the next five years.	BW Gold acknowledges the comment and will address the concern through the methods described above.	No	LDN/UFN	ERM		Jesse	RT	N/A		N/A
902	Chapter 1 Introduction and Project Overview - Section 1.3.7	Spatial Data	LDN_UFN		Jun 06, 2022	1	New		No	"Spatial data **required.**" Requirement states reclamation *proposed* annually over the next 5 years. Although response states that reclamation areas will be largely dependent on actual construction, proposed reclamation areas can still be provided based off of construction plans thus far. There must be estimates/plans for which areas will need to be disturbed in each year?	Additional detail on proposed reclamation is provided in Chapter 4, Reclamation and Closure.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission		Ready for Publishing
902	Chapter 1 Introduction and Project Overview - Section 1.3.7	Spatial Data	LDN_UFN		Jul 22, 2022	2	Follow Up	Information Requirement	No	Response does not adequately address the comment. It is noted that "additional detail on proposed reclamation is provided in Chapter 4" however this chapter does not include any spatial data as mentioned in the original comment (e.g., no figure maps showing reclamation proposed annually over the next 5 years).	Maps 3.3-5 to 3.3-10 in Chapter 3 show the general arrangements for Y-2 to Y+3 and provide an overview of areas of disturbance and topsoil stockpile areas. As mentioned in Section 4.8 of Chapter 4 (with regards to the first 5 years) "the primary focus of reclamation activities will consist of salvaging and stockpiling surface soil [...]". Therefore, the existing spatial data provides an overview of the most pertinent reclamation activity planned for the first 5 years. Section 4.8 of Chapter 4 (Reclamation and Closure Plan) provides a description of the reclamation proposed annually over the 5 years. Additional spatial data will not be prepared at this time, however BW Gold would be pleased to share spatial data with the Nations if requested.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
902	Chapter 1 Introduction and Project Overview - Section 1.3.7	Spatial Data	LDN_UFN Baylie Sjodin		Sep 01, 2022	3	Follow Up	Comment	No	Section 1.3.7 Spatial Data of the JAIR states that "Spatial data requirements include the reclamation proposed annually over the next 5 years." Please see page 2-3 of the JAIR for reference. The maps suggested in the previous response display construction activites only, and not reclamation. Reclamation would be post-closure operations and the spatial data to represent it to show that just as much planning has gone into reclamation then actual operations. It is important for Artemis to remember that these are the Nations' Traditional Lands, and visual evidence of planned reclamation activites is an important part of informing community members.	As stated in response to Round 1 and Round 2 comments the reclamation activities in the first 5 years (Y-2 to Year +3) are limited and primarily focused on salvaging and stockpiling surface soil. Selective and site-specific application of vegetation on exposed erodible soils is a common practice around construction sites. There will also be a number of reclamation research studies and limited progressive reclamation opportunities as well as vegetation treatment used to stabilize exposed soils. Section 4.2.4 (Progressive Reclamation/Sequencing) of the Reclamation Closure Plan indicates the landforms that will be completed prior to closure and can be progressively reclaimed (i.e., Upper Waste Stockpile in Y+19, Ex-pit haul roads in Y+19, and the explosive storage facilities in Y+19). The Annual Reclamation Report would typically include examples of visual representation of activities pertaining to reclamation and reports an annual reconciliation of area disturbed and area reclaimed.		LDN/UFN	ERM		Rolf - Peter		Ready for Submission	TD, Sept 14	Ready for Publishing
903	Chapter 1 Introduction and Project Overview - Section 1.3.4.2	General	LDN_UFN		Jun 06, 2022	1	New		No	Provincial park bullet: why is there no mention of Itcha Ilgachuz Provincial park? It is less than 40 km south of Blackwater Mine site.		No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
904	Chapter 1 Introduction and Project Overview - Table 1.3-5	General	LDN_UFN		Jun 06, 2022	1	New		No	"KMPG" should be "KPMG"?	Correct, it should be KPMG. Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
905	Chapter 1 Introduction and Project Overview - Section 1.5.3 and 1.5.2.3	Acronym	LDN_UFN		Jun 06, 2022	1	New		No	UDN - is this meant to be UFN? It is not defined anywhere in text.	Correct, the reference should be to UFN and LDN. Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Jesse/Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
906	Appendix 9-A	Existing Permits	LDN/UFN		Jun 06, 2022	0			No	"The permittee must conduct visual monitoring of the Rapid Infiltration Basins daily when there is effluent in the basins..." Monitoring details outlined in this paragraph should be included in the monitoring section of CEMP - I don't think they were in the reviewed draft. This is an issue with reviewing plans that reference other plans that were not complete - please ensure this adjustment is made.	Please note that visual monitoring of the Plant Site SCP is a requirement of Permit 110602 for the Early Works activities and is therefore outside the scope of the current Application. BW Gold will conform with all requirements of the Early Works permit. Note that although the Rapid Infiltration Basins are not explicitly noted in the CEMP, Section 16.6 includes the following commitment: "Water features adjacent to construction sites will be visually monitored for turbid waters by the Environmental Monitor and construction crew several times a day during active work." The requirements in this plan supersede Early Works once Major Works construction begins.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing

906	Appendix 9-A	Existing Permits	LDN/UFN		Jun 06, 2022	1	New		Yes	The following sentence in the response has not been added to section 16.6 of the CEMP, as such a section does not exist. Please indicate where this has been added. "Note that although the Rapid Infiltration Basins are not explicitly noted in the CEMP, Section 16.6 includes the following commitment : "Water features adjacent to construction sites will be visually monitored for turbid waters by the Environmental Monitor and construction crew several times a day during active work. "	The cited text was in a previous revision of the CEMP (November 2021) and subsequently removed from the revised final version of the CEMP submitted with the final Application. Monitoring requirements for the Rapid Infiltration Basins are included in the Early Works Permit. BW Gold will comply with all monitoring requirements in the CEMP, the SEPSCP, other management and monitoring plans and all permit conditions. As such, it is not necessary for permit monitoring requirements to be duplicated in monitoring plans.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
906	Appendix 9-A	Existing Permits	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	There is no mention of monitoring requirements for the Rapid Infiltration Basins in the Early Works Permit. As such, include it in the SEPSCP.	The plant site SCP and RIBS will now be utilized in the construction phase - the SEPSCP will be updated to incorporate monitoring requirements for these facilities. BW Gold recognizes that management plans may need various updates as a result of permitting reviews, in particular plans like the SEPSCP which are intended to be live documents that are updated as the Project progresses and industry-standard approaches to erosion and sediment control evolves. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie		Ready for Submission	KP, Aug 13	Ready for Publishing
907	Appendix 9-A	Surface Preparation Activities	LDN/UFN		Jun 06, 2022	0			No	No mention of wind erosion - this was requested to be addressed in Early Works as well. Please adjust to include not just rainfall and compaction.	Please see the Air Quality and Fugitive Dust Management Plan for a list of the activities that could result in the generation of fugitive dust.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
907	Appendix 9-A	Surface Preparation Activities	LDN/UFN		Jun 06, 2022	1	New		No	Do not think that referencing another plan here is sufficient, please add wind erosion to this plan specifically.	Section 2 of the SEPSCP notes that the plan is intended to be used in conjunction with other management and monitoring plans, including the Air Quality and Fugitive Dust Management Plan. To reduce duplication, mitigation and monitoring measures for wind erosion are not included in both plans.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
907	Appendix 9-A	Surface Preparation Activities	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up	comment	No	The response provided by Artemis for this comment does not adequately address what the reviewer is asking. Please revisit original comment and provide a detailed response for clarification. The generation of fugutive dust is the outcome of the eroded material, the Fugitive Dust Management Plan does not address the effects of wind erosion at the source of the particles, i.e. loss of topsoil.	BW Gold recognizes that management plans may need various updates as a result of permitting reviews. The SEPSCP will be revised to indicate that many of the ESC measures included in Section 7, such as surface roughening (Section 7.3.9), silt fences (Section 7.3.12), temporary seeding (Section 7.3.14), mulching (Section 7.3.15), rolled erosion control products (Section 7.3.16), and polyethylene covers (Section 7.3.17) also help to mitigate the effects of wind erosion. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing
907	Appendix 9-A	Surface Preparation Activities	LDN/UFN (Christina Delaney)		Oct 06, 2022	4	Follow Up	comment	No	The response does not address evaluation of or management of aeolian processes causing erosion specifically. Simply claiming that some of the measures intended to mitigate surface water erosion have a secondary function in regards to wind erosion is inadequate.	BW Gold disagrees with the suggested revision to include evaluation/management of aeolian processes causing erosion within this plan, and will not make the change. Assessment of wind-induced erosion is not a requirement of the guidance documents for erosion and sediment control plans listed in the references section (e.g., 'Developing a Mining Erosion and Sediment Control Plan' (BC MOE. 2015a), nor of the Joint Application Information Requirements for Mines Act and Environmental Management Act Permits (BC EMPR & ENV. 2019). The reviewer is again referred to the Air Quality and Fugitive Dust Management Plan (AQDMP) - see table 6-1 of that plan for the activities that have the potential to result in the generation of fugitive dust (i.e., "evaluation of aeolian processes causing erosion specifically"). Table 8.2-1 of the AQDMP provides detailed BMPs and mitigation measures for all dust sources (i.e., the "management of aeolian processes causing erosion").		LDN/UFN	KP			TD	Ready for Submission	TD, Oct 19	Ready for Publishing
907	Appendix 9-A	Surface Preparation Activities	LDN/UFN (Christina Delaney)		Nov 17, 2022	5	Follow Up	comment	No	At the november 9th meeting, BW agreed to include wind erosion in either the soil management plan or the SEPSCP, we will wait to see those revisions.	Wind erosion will be addressed in a separate sub-section of the SEPSCP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP					RT; nov 29	Ready for Publishing
908	Appendix 9-A	Soil Loss Estimation	LDN/UFN		Jun 06, 2022	0			No	When will we see these results? How will the results inform eorsion and sedimentation adaptive management and the selection of controls?	The erosion potential classification will be determined using the RUSLEFAC equation for specific areas to be disturbed for project construction, as described in Section 6.2; erosion potential will vary across the site. The erosion potential will be calculated for disturbance areas and included in the design criteria for IFC drawings. RUSLEFAC will be used to guide the selection of appropriate erosion control strategies - areas identified as having greater potential soil loss/erosion will require more intensive erosion and sediment control measures and monitoring. Where required, additional field truthing will be completed: hand-dug test pits will be excavated to a maximum depth of 1.0 metres, and the soils will be characterized and potentially analyzed for particle size, organic matter, structure and permeability.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
908	Appendix 9-A	Soil Loss Estimation	LDN/UFN		Jun 06, 2022	1	New		Yes	Results have not been added to the updated SEPSCP nor has a date been provided in the response for when we will see these results. Please inform on when we can expect them for review.	Please see Section 2 of the SEPSCP - the intent of the document is to outline strategies and design objectives with appropriate flexibility to allow the facilities to be field-fit to suit the site conditions. The plan is not meant to be prescriptive - BMPs will be implemented as directed by the site Environmental Manager or a delegate and based on site-specific conditions. The sediment control and water management structures will be constructed and operational prior to soil disturbance, which will minimize the production of sediment laden waters on site and prevent transport of sediment-laden water from leaving the mine site. The design of erosion and sediment control measures should be viewed as a flexible process that responds to new information that is obtained throughout the construction phase - the design of erosion and sediment control measures should be expected to evolve throughout construction to varying degrees based on site conditions and field performance of implemented measures.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing

908	Appendix 9-A	Soil Loss Estimation	LDN/UFN		Jul 22, 2022	2	Follow Up	Information Requirement	Yes	We acknowledge the response that the design of erosion and sediment control measures will evolve and need to be site specific, however this is still a data gap. As such the Nations are requesting a workplan that describes who/what/when/how this data will be collected and to identify the data gaps in a revised version of the SEPSCP. Additionally, we request a memo describing what additional actions/mitigations measures will be implemented in the case that soil loss potential exceeds the Canadian tolerance of 6 tonnes/ha/year. This scenario has not been addressed in the plan."	Thank you for your comment. BW Gold respectfully disagrees with the suggested revision and will not make the change, as Section 6.2 (Soil Loss Estimation) adequately describes the methodology (the "what" and "how" requested by the reviewer) that will be followed to collect the data to determine soil loss classes for each work area (e.g., "these factors will be obtained from baseline reports for each discipline" and "where required, additional field truthing will be completed ..."). ESC measures will be identified by QPs and the Environmental Monitor (EM) prior to installation, and will vary by site and project phase. Implementation and installation of ESC measures will be completed under the direction of the EM. Procedural controls are described in Section 7.2 of Appendix 9-A, which describes how work schedules will be developed to establish the timing of the selection and installation of ESC measures. Please see attachment "R2_LDN UFN_Comment ID 908.pdf".		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
908	Appendix 9-A	Soil Loss Estimation	LDN/UFN (Mikayla Davis)		Sep 01, 2022	3	Follow up	Information Requirement	Yes	"These factors will be obtained from baseline reports for each discipline (e.g., hydrometeorology reports; soil and terrain reports; and site investigations). Where required additonal ground truthing will be completed...". BW states these factors will be obtained from baseline reports, we are requesting to review this data so please provide and indicate exactly which baseline reports (and sections) will be used here. Are we to assume that variables R, K, L, S, C, P in the RUSLEFAC equation are all found in these baseline reports? Only field truthing for variable K is discussed in section 6.2, and very vaguely. For ground truthing, only soil characterization is committed to. Since it is stated that soils will "potentially be analyzed for particle size, organic matter, structure and permeability". It is not sufficient to only characterize soils, in order to confidently determine the soil erodibility factor, the struture, organic matter, particle size, and permeability must be determined. Please commit to doing these soil tests in the updated plan. The response does not address the original comment where we requested a workplan. We still need to know when this ground-truthing work will be completed, especially because Early Works is proposed to start September 19th 2022. The response also does not state who will be doing the work as requested. We understand that the EM and QPs will identify ESC measures, but this does not answer our question about who will be conducting the ground-truthing work on erosion potential, please indicate who will do this and include this in a future iteration of the plan. The latter portion of this comment that was deleted is partially resolved based on the memo provided, I have added the deleted portion (in red text) to the original comment for records. However, please see comment ID 916, as we will be requesting IFC drawings to review the erosion potential calculated.	Rainfall and runoff are discussed in Appendix 2-B (2020 Hydrometeorology Report) - Section 3.2.3 and 3.2.4 Baseline terrain and soil conditions are discussed in Appendix 2-D (Soils, Terrain, and Surficial Geology 2013 Baseline Report) - Section 3. Slope will vary across the Project area and will be determined on a site and work-area specific basis. The remaining variables are described in the "Revised Universal Soil Loss Equation for Application in Canada: A Handbook for Estimating Soil Loss from Water Erosion in Canada" by Wall et al. (2002) . The reviewer is referred to this document for a detailed explanation of the method and factors used for soil loss estimation. The report is available at the following link: https://sis.agr.gc.ca/cansis/publications/manuals/2002-92/rusle-can.pdf BW Gold recognizes that management plans may need various updates as a result of permitting reviews. The SEPSCP will be revised to indicate that, where required, additional field truthing will be completed: test pits will be excavated to a maximum depth of 1.0 metres (hand-dug or using other means of excavation), and the soils will be characterized and potentially analyzed for particle size, organic matter, structure and permeability, as stated in the response to the original comment during screening. However, it is not the purpose of the plan to "state who will be doing the work" and thus this will not be included in future iterations of the plan. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups. As noted in the response to the original comment in Round 2, a work plan will not be provided. With respect to Early Works activities, please see Appendix D and Appendix E of the Early Works Joint Mines Act / Environmental Management Act Permits Application.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD, Sept 14	Ready for Publishing
908	Appendix 9-A	Soil Loss Estimation	LDN/UFN (Mikayla Davis)		Oct 06, 2022	4	Follow up	Information Requirement	Yes	Thank you for providing these baseline reports. The reviewer acknowledges that some variables such as slope will be determined on site as construction continues. Once this data is collected and the soil loss potential is calculated for each site, the Nations request an opportunity to review the soil loss potential calculations prior to disturbance occurring. We ask that BW Gold makes this commitment for the life of mine. The reviewer would like the following addition made to the SEPSCP as the response is not sufficient, “Where required, additional field truthing will be completed prior to disturbance occurring : test pits will be excavated to a maximum depth of 1.0 m (hand-dug or using other means of excavation), and the soils will be characterized and analyzed for particle size, organic matter, structure and permeability.” With regard to “who will be doing this work”, at an absolute minimum the SEPSCP needs to indicate that a qualified professional will be conducting this work. Determining the variables for the soil loss potential equation and characterizing soils requires a professional with adequate experience. Please add the section 6 that a qualified professional will conduct this work.	BW Gold will report out on soil loss potential calculations as per the reporting requirements listed in the management plan. Please see the response to the Round 3 related comment - BW Gold has previously committed to adding the following to the plan "The SEPSCP will be revised to indicate that, where required, additional field truthing will be completed: test pits will be excavated to a maximum depth of 1.0 metres (hand-dug or using other means of excavation), and the soils will be characterized and potentially analyzed for particle size, organic matter, structure and permeability"; BW Gold notes that this was also stated in the response to the original comment during screening. With regard to “who will be doing this work”, please see Section 3 of the report which outlines the roles and responsibilities of BW Gold Personnel and contractors, specifically that the EPCM and other contractors are responsible for the following: Ensure that ESC measures are installed/constructed based on plans and according to design specifications approved by and under the supervision of a Certified Professional in ESC.		LDN/UFN	BWG	KP	Travis	TD	Ready for Submission	TD, Oct 19	Ready for Publishing
908	Appendix 9-A	Soil Loss Estimation	LDN/UFN (Mikayla Davis)		Nov 17, 2022	5	Follow up	Information Requirement	Yes	The concern behind this comment is that the soil loss calculations will guide the ESC measures implemented. We are requesting that soil loss results are provided to the Nations as they are calculated and a committment from BW Gold to discuss the results with the Nations at the EMB table. (See comment ID 916) There seems to be some confusion on the second paragraph in the response. The reviewer is specifically asking for the word "potentially" to be removed from this sentence "...and the soils will be characterized and potentially analyzed for particle size, organic matter, structure, and permeability.", and be edited to "...and the soils will be characterized and analyzed for particle size, organic matter, structure, and permeability."	BW Gold understands the concerns related to erosion risk and will provide a site-wide erosion potential map to be appended to the next revision of the SEPSCP. The sentence "The erosion potential will be calculated for disturbance areas and included on the Issued for Construction (IFC) drawings" to state "The site-wide erosion potential has been calculated and is included in Appendix B". The results of the assessment will be summarized in Section 6.2 of the plan. The word "potentially" will be removed from the sentence "Where required, additional field truthing will be completed: test pits will be excavated to a maximum depth of 1.0 metres (hand-dug or using other means of excavation), and the soils will be characterized and analyzed for particle size, organic matter, structure and permeability." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups. Please see attachment "R5_LDN UFN_Comment IDs 908, 909, 911, and 916.pdf"		LDN/UFN	BWG					RT; nov 30	Ready for Publishing
909	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jun 06, 2022	0			No	Where is the erosion risk potential data for the site? Please provide.	-	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
909	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jun 06, 2022	1	New		No	This is an incomplete plan with a data gap as large as this. There is no risk assessment for the potential for soil loss from the site at this time based on the response provided. The Nations cannot comment on this further. This data is requested to be provided for review as soon as it is available - and this should be well in advance of the construction schedule.	The word "potentially" will be removed from the sentence "Where required, additional field truthing will be completed: test pits will be excavated to a maximum depth of 1.0 metres (hand-dug or using other means of excavation), and the soils will be characterized and analyzed for particle size, organic matter, structure and permeability."	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing

909	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jul 22, 2022	2	Follow Up	Information Requirement	Yes	Same comment as comment ID 908.	Please see attachment "R5_LDN UFN_Comment IDs 908, 909, 911, and 916.pdf"		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
910	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jun 06, 2022	0			No	Does and ESC professional have a role in performance monitroing and routine inspection of measures? Who does this? What are their qualifications to make such an assessment and guide adaptive management?	BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	BWG		Ryan	TD	N/A	GM, June 29	Ready for Publishing
910	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jun 06, 2022	1	New		No	With early works planned to commence this Spring (2022), Artemis should have an environmental specialist lined up with their qualifications listed. Please include who the ESC professional will be and what their qualifications are.	BW Gold restates its previous response and continues to plan for the start of construction.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
910	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Regardless of when the SEPSCP will be revised and available for review. The Nations request they are notified and provided with the credentials/experience of the ESC professional once they are hired by BW Gold and have ongoing consultation on this.	Additional qualified persons may be added at any time. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	BWG		Travis	TD	Ready for Submission	AT: Aug 12	Ready for Publishing

911	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jun 06, 2022	0			No	Where is the erosion potential classification data for the site? Please provide.	The erosion potential classification will be determined using the RUSLEFAC equation for specific areas to be disturbed for project construction, as described in Section 6.2; erosion potential will vary across the site. Factors used to determine soil loss in RUSLEFAC are rainfall/runoff, soil erodibility, slope length, slope steepness and vegetation. These data will be obtained from baseline reports for each discipline (e.g., Baseline Climate Report; Soils, Terrain, Surficial Geology Baseline Report; Revised Landform and Terrain maps; and site investigations), and the erosion potential will be calculated for disturbance areas and included in the design criteria for IFC drawings. Where required, additional field truthing will be completed: hand-dug test pits will be excavated to a maximum depth of 1.0 metres, and the soils will be characterized and potential analyzed for particle size, organic matter, structure and permeability.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
911	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jun 06, 2022	1	New		No	While soil potential classifications have been included in table 6-1, it would be helpful to include a description of each class. When will the erosion potential be calculated for site? You have the disturbance areas confirmed, why can't erosion potential areas be delineated across site using data obtained from baseline reports and then provided within the plan for reference? See comment ID7	Table 6-1 of Appendix 9-A includes the Soil Erosion Class in the first column and a description of each class in the second column (the potential soil loss in tonnes/ha/year). The soil erosion potential is not calculated for the entire mine site - it is calculated for individual work areas, since the factors that are used to calculate the erosion potential (type and depth of soil, slope length, slope steepness, vegetation and "support practice factor"), as well as construction activities, are highly variable. The "support practice factor" refers to the measures outlined in Section 7 of the SEPSCP that will be implemented to reduce the amount and rate of the runoff water by modifying the flow pattern, grade or direction of surface runoff, thereby reducing the amount of erosion. The soil loss estimates will be supplemented with judgement and experience of the QP so that the erosion potential assessment is appropriate for each individual work area.	RT/TD to review	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
911	Appendix 9-A	Erosion Management and Sediment Control Strategies	LDN/UFN		Jul 22, 2022	2	Follow Up	Information Requirement	Yes	Same as comment ID 908.	Thank you for your comment. Please see response to follow-up comment 908. Please see attachment "R5_LDN UFN_Comment IDs 908, 909, 911, and 916.pdf"		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
912	Appendix 9-A	Sediment Basins	LDN/UFN		Jun 06, 2022	0			No	Include reference to testing for PAG materials in SCPs, to be discussed in Section #.	Overburden will be used for construction purposes across the mine site as needed. PAG and metal leaching materials will not be used for construction of SCPs. Please see the ML/ARD Management Plan for a detailed description of the materials testing program.	No	LDN/UFN	Lorax		Timo	GM	Ready for Submission	GM; june 14	Ready for Publishing
912	Appendix 9-A	SCP and Sediment Basins	LDN/UFN		Jun 06, 2022	1	New		No	See ID 77 - the request here is to understand how (what parameters) the sediment that collects in these ESC features will be confirmed to be suitable for use as fill or placement in stockpiles. The questions has not been answered.	The sediment that collects in the ESC features will not be used as fill or placed in soil stockpiles. Rather, the material may be placed in the Upper or Lower Waste Stockpiles if geochemical testing indicates that it is NPAG. For characterization purposes, the sediment material would be tested for the same suite of parameters as waste rock and overburden. This will include at a minimum an aqua regia digestible elemental scan at the onsite laboratory (as outlined in the ML/ARD Management Plan, Appendix 9-D of the Application). Should sediments be identified to be PAG1, PAG2 or NAG3, they will be disposed in the TMF.	RT/TD to review	LDN/UFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing
912	Appendix 9-A	SCP and Sediment Basins	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved until we can see the updated SEPSCP. Provide the list of parameters or at least indicate the exact location of that list within the ML/ARD plan, by adding a statement tp the SEPSCP that indicates "sediment collected using the ESC measures will be tested for the same parameters as waste rock, as per Table __ in Section __ of the ML/ARD plan." Indicate how and when monitoring of material collected by ESC measures will take place (comment 920 from previous round moved to be included in this related comment).	As noted in the Round 1 response, the sediment that collects in the ESC features may be placed in the Upper or Lower Waste Stockpiles if geochemical testing indicates that it is NPAG, or in the TSF should the materials be classified as PAG1, PAG2 or NAG3. BW Gold may also test the sediment for suitability as reclamation material. The proposed geochemical testing was included in the R1 response; nothing more than this will be proposed at this time. When a cumulative volume of sediment builds up from the various ESC features (≤100 m^3), one sample will be collected and undergo the proposed testing program. Suitable management strategies therefore exist to place this material, regardless of the geochemical testing that is conducted, given the insignificant volumes that will be generated over the life of the project compared to the scale of waste rock, overburden and tailings. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD; Aug 15	Ready for Publishing

912	Appendix 9-A	SCP and Sediment Basins	LDN/UFN		Sep 01, 2022	3	Follow Up	comment	No	Unresolved. We request committment to add the details requested in the orginal comment and round 2 comment, in addition to the information provided in the round 2 response to the MP when it is updated.	Sediment disposal and geochemical characterization of sediment, as discussed in the responses to the previous rounds' comments, will be addressed in an updated revision of the SEPSCP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing
913	Appendix 9-A	Surface Roughening	LDN/UFN		Jun 06, 2022	0			No	How does this method not increase compaction on the slope? The preferred method is to use an excavator to open holes on the slope, dumping the material that is generated from the holes in mounds between the holes. This is a more effective strategy that intercepts and slows water moving downslope and also promotes revegetation. Refer to research by David Polster for detailed methods. On these slopes, is there an opportunity to include large CWD for additional soil stability and aiding revegetation efforts?	Cut and fill slopes will be roughened with tracked machinery where appropriate - roughening with tracked machinery will be limited to sandy soils to avoid undue compaction of the soil surface.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
913	Appendix 9-A	Surface Roughening	LDN/UFN		Jun 06, 2022	1	New		No	Please add the preferred method (mentioned in original comment) into Section 7.3.9 as an option to use when there is risk of compaction to soil. The latter half of the response about sandy soils has not been incorporated into the updated SEPSCP. *On these slopes, is there an opportunity to include large CWD for additional soil stability and aiding revegetation efforts?*	Appendix 9-A is not intended to contain a comprehensive inventory of all potential BMPs, nor all the advantages and disadvantages of all ESC measures. While BW Gold understands that creating pits and mounds is a method that can be used for riparian naturalization projects to restore biodiversity, with the mounded soils being left loose and rough (Lands Near Water, Riparian Restoration & Enhancement, Stewardship Practices Series), or to increase topographic heterogeneity and promote the establishment and development of vegetation communities for restoration projects (Kinbasket and Arrow Reservoirs Revegetation Management Plan, Debris Mounds and Wind Row Construction Pilot Program), it does not seem to be an established sediment control practice for disturbed slopes. Dumping of material in loose and rough mounds on sloped surfaces as recommended by the reviewer could introduce additional material that would be entrained by runoff and require additional sediment control measures (e.g., silt fence). Slope texturing/ tracking is a standard BMP on slopes (see Erosion and Sediment Control Association of BC ESC Best Management Practices; Alberta Transportation Erosion and Sediment Control Manual)	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
913	Appendix 9-A	Surface Roughening	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	We are not asking for "a comprehensive inventory of all potential BMPs...", we are asking for the plan to indicate alternative methods that will be used when compaction risk is high (not working in sandy soils) and should be included as a mitigation measure to deal with such circumstances. We suggest the placement of CWD rather than track packing as a means of increasing surface roughness.	Thank you for your comment. BW Gold respectfully disagrees with the suggested revision and will not make the change - surface roughening is a temporary soil stabilization measure. The use of CWD for reclamation is discussed in Chapter 4 of the Application (reclamation and closure plan). The Environmental Monitor (EM) will identify appropriate ESC measures (alone or in combination) to use when soil compaction risk is high - alternatives are currently included in the plan (e.g., rolled erosion control products, mulch covers, temporary seeding, etc..)		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
913	Appendix 9-A	Surface Roughening	LDN/UFN (Okane_Marty Sangster)		Sep 06, 2022	3	Follow Up	comment	No	There are a number of options with regard to ensuring that the soil is loosened and scarified and to allow for erosion control: • Option 1: Use traditional method of placement with a dozer and within a reasonable time frame, using an airseeder or other type of seeding equipment to plant grass. The tilling action of this method will ensure that proper aeration of the soil will occur and allow for the plantlife to prevent major erosion. • Option 2: Attempt a hummock/mogul type formation on the sloped surface of the landform. This incorporates small depression adjacent to a mound which is offset from the next area below with a mound and then depression. This can be completed using a small excavator. The soil is fully aerated by this method and is loose. Likewise, the alternating depression/mounding minimizes the possible erosion that can occur as the upper most depression must fill with fluid before either seeping into the material or draining into the next depression below. There is never enough energy developed that could create erosion issues. Grass seeds can then be hand spread across the area and will further minimize the risk of erosion. Appropriate erosion control measures should be in place and documented in the updated plans prior to construction.	Section 7.3 of Appendix 9-A is not intended as an exhaustive list of ESC measures, rather a summary of common BMPs and their typical application and implementation. The most suitable BMP for different areas of the Project site will be implemented under the direction of the EM. This may include BMPs not currently described in the plan, such as those suggested by the reviewer in their comment. Appropriate erosion control measures will be in place prior to construction.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing
913	Appendix 9-A	Surface Roughening	LDN/UFN (Mikayla Davis)		Oct 06, 2022	4	Follow Up	comment	No	LDN and UFN request ongoing consultation on the erosion control measures used and their efficacy throughout the life of the mine.	LDN and UFN will be engaged on on the erosion control measures used and their efficacy throughout the life of the mine through several forums (non-exhaustive list): -IEM inspection reports, monthly meetings -Involvement of UFN and LDN env monitors in project construction, operations, closure and post-closure and subsequent reporting -Site updates during EMB meetings -Periodic reviews of the various ESCP plans through the EMC -ESCP Management Plan reporting -Annual ARR and EMA permit reporting -Annual EAC and DS reporting		LDN/UFN	BWG		Travis		Ready for Submission	TD, Oct 19	Ready for Publishing
914	Appendix 9-A	Training and Awareness	LDN/UFN (Mikayla Davis)		Jun 06, 2022	0			No	How often will this training be offered to employees? Are every reminded of this requirement throughout their employment?	As noted in Section 8.1, all staff and subcontractors responsible for the management, implementation, monitoring, and reporting of erosion and sediment control measures will be QPs and have previous experience. As such, training and awareness activities will be focused on any sensitive features in the construction area rather than on installation and monitoring methods, for example.	No	LDN/UFN	BWG		Ryan	TD	N/A	GM, June 29	Ready for Publishing

914	Appendix 9-A	Training and Awareness	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please incorporate this commitment into the SEPSCP "ESC refresher training will be provided annually to site staff (likely the month prior to the onset of spring freshet) involved in installation, monitoring, inspections and replacement of ESC measures. ". Additionally we want a commitment from BW Gold for ongoing consultation with LDN and UFN on the development of the training packages.	Please refer to Section 12 'Project Orientation' of the Appendix 9-C Construction Environmental Management Plan which states *'To achieve broad awareness of this CEMP, all mine-site personnel must attend a one-time orientation session upon arrival at the Project site that includes site-specific safety and environmental components. Orientation materials specific to the environment will be prepared by BW Gold, and delivery of the orientation sessions will be a collaboration between BW Gold staff and the EPCM contractor's Environment, Health and Safety Representatives. Refresher training intervals for site on-boarding are to be determined, however, regular crew tailgate meetings will cover the relevant seasonal aspects of the topics below as a result of on-site observations, seasonal risks and throughout an annual period.* *Personnel must sign and date the orientation record confirming that they have received the indoctrination materials and presentation. Signed environmental orientation meeting records must be provided to the HSE Department designate and retained on record as required by the Code. From an environmental perspective, the orientation will include but not be limited to the following topics and Erosion prevention and sediment control is listed as one of the topics.'* The Plan then goes on to state *'Refresher training will be provided to all employees following a significant incident warranting refresher training to all staff. Additional site- and task-specific training will be provided to site workers as required. '* BW Gold can provide the training packages to LDN and UFN for informational purposes.		LDN/UFN	BWG				Ready for Submission	TD; Aug 11	Ready for Publishing
914	Appendix 9-A	Training and Awareness	LDN/UFN (Mikayla Davis)		Sep 01, 2022	3	Follow up	Comment	No	We are requesting this specific statement be added to the SEPSCP " ESC refresher training will be provided annually to site staff (likely the month prior to the onset of spring freshet) involved in installation, monitoring, inspections and replacement of ESC measures. ", we disagree that the text in the CEMP does an adequate job of covering the requested addition.	It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
914	Appendix 9-A	Training and Awareness	LDN/UFN (Mikayla Davis)		Jun 06, 2022	1	New		No	While it is acknowledge that QPs will have previous experience, Artemis should be providing training/reminders of ESC measures on a regular basis. Please include how often this training will be offered and a description of the qualifications of the QP. As well include the latter half of the response " As such, training and awareness activities will be focused on any sensitive features in the construction area rather than on installation and monitoring methods, for example.".	ESC refresher training will be provided annually to site staff (likely the month prior to the onset of spring freshet) involved in installation, monitoring, inspections and replacement of ESC measures. The training package will be developed and facilitated by the site environmental team under the direction/guidance of a qualified CPESC QP. The training will focus on sensitive features such as using maps identifying where creeks and wetlands appear on the mine that where ESC measures would be installed to protect waterways.	No	LDN/UFN	BWG		Cole	TD	Ready for Submission	TD, Jun 28	Ready for Publishing
915	Appendix 9-A		LDN/UFN		Jun 06, 2022	0			No	"The planned order of construction activities is as follows:" This list is a little confusing as not all points discussed construction activities or timing - please edit so that it is easier to understand.	This list is meant to be an overview of typical construction sequencing for a cut and fill slope - detailed activities and the order in which they will be implemented will be provided in the IFC drawings. The plan will be updated to indicate this.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
915	Appendix 9-A	Construction Sequencing	LDN/UFN		Jun 06, 2022	1	New		No	Resolved, however it would be helpful to indicate exactly where the IFC drawings are located.	Please see Section 2 of the SEPSCP - the intent of the document is to outline strategies and design objectives with appropriate flexibility to allow the facilities to be field-fit to suit the site conditions. IFC drawings will be prepared for the various facilities prior to construction - they are not included in this plan, as it is not meant to be prescriptive - BMPs will be implemented as directed by the site Environmental Manager or a delegate and based on site-specific conditions. The sediment control and water management structures will be constructed and operational prior to soil disturbance, which will minimize the production of sediment-laden waters on site and prevent transport of sediment-laden water from leaving the mine site. The design of erosion and sediment control measures should be viewed as a flexible process that responds to new information that is obtained throughout the construction phase - the design of erosion and sediment control measures should be expected to evolve throughout construction to varying degrees based on site conditions and field performance of implemented measures.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
915	Appendix 9-A	Construction Sequencing	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	"2. Clear, and strip work areas as required and link directly all ESC measures associated with each construction stage and area." Consider rewording/reorganizing this list to make it more clear. What is meant by "link directly"?	Please see response to comment 916 in the initial review phase (Round 0) - This list is meant to be an overview of typical construction sequencing for a cut and fill slope - detailed activities and the order in which they will be implemented will be provided in the IFC drawings. The plan will be updated to indicate this statement. The clause "link directly" means that ESC measures may be installed sequentially as each work area develops (i.e., installed in stages or batches) and that the ESC measures should be linked together, as required, as different work areas combine and are connected to enhance coordination of ESC. For example, if clearing/stripping of a certain footprint is being undertaken, there may be several active work areas within that footprint as stripping activities may be happening concurrently in different areas. Rather than employ ESC measures for the entire footprint to be cleared up front, localized ESC measures for each active work areas may be implemented that are linked together to allow for a single discharge point from all active work areas, or as active work areas expand to interact/join with other active work areas.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
916	Appendix 9-A		LDN/UFN		Jun 06, 2022	0			No	"2. Clear, and strip work areas as required and link directly all ESC measures associated with each construction stage and area." Consider rewording/reorganizing this list to make it more clear. What is meant by "link directly"?	This list is meant to be an overview of typical construction sequencing for a cut and fill slope - detailed activities and the order in which they will be implemented will be provided in the IFC drawings. The plan will be updated to indicate this statement. The clause "link directly" means that ESC measures will be field-fit to site conditions.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
916	Appendix 9-A	Construction Sequencing	LDN/UFN		Jun 06, 2022	1	New		No	Resolved, however it would be helpful to indicate exactly where the IFC drawings are located.	Please see Section 2 of the SEPSCP - the intent of the document is to outline strategies and design objectives with appropriate flexibility to allow the facilities to be field-fit to suit the site conditions. IFC drawings will be prepared for the various facilities prior to construction - they are not included in this plan, as it is not meant to be prescriptive - BMPs will be implemented as directed by the site Environmental Manager or a delegate and based on site-specific conditions. The sediment control and water management structures will be constructed and operational prior to soil disturbance, which will minimize the production of sediment-laden waters on site and prevent transport of sediment laden water from leaving the mine site. The design of erosion and sediment control measures should be viewed as a flexible process that responds to new	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
916	Appendix 9-A	Construction Sequencing	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	We request that the IFC drawings are provided for review prior to construction starting as an appendix of the SEPSCP, or at the minimum a commitment from BW Gold for ongoing consultation with LDN and UFN on the development and approval of the IFC drawings.	BW Gold disagrees with the suggested revision (to include IFC drawings in the SEPSCP or a commitment that BW Gold will provide the drawings for approval) and will not make the change. The IFC drawings will be provided for information purposes, if requested.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, Aug 13	Ready for Publishing
916	Appendix 9-A	Construction Sequencing	LDN/UFN (Mikayla Davis)		Sep 01, 2022	3	Follow Up	Comment	Yes	BW Gold must continue to engage LDN and UFN throughout the life of mine, therefore we strongly disagree with the response provided. We request that the IFC drawings be provided as soon as they are developed, and expect BW Gold to make this commitment. As you've described the SEPSCP is not meant to be prescriptive therefore to adequately review the ESC measures you will use we need to be able to review the IFC drawings. We will be raising this comment with EMLI.	IFC drawings will be provided to EMLI for approval a minimum of 60 days prior to construction of each individual structure, or as otherwise required by the final Mines Act permit or the Code.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing

916	Appendix 9-A	Construction Sequencing	LDN/UFN (Mikayla Davis)		Oct 06, 2022	4	Follow Up	Comment	Yes	Will the IFC drawings be provided to LDN and UFN 60 days prior? Or just EMLI? We request that they are provided to both EMLI and LDN and UFN.	IFC drawings will be provided to EMLI 60 days prior to meet regulatory requirements in the HSRC code/ JAIR, MAP. IFC drawings may be provided to LDN and UFN concurrently for **informational purposes only.**		LDN/UFN	BWG		Travis		Ready for Submission	TD, Oct 19	Ready for Publishing
916	Appendix 9-A	Construction Sequencing	LDN/UFN (Mikayla Davis)		Nov 17, 2022	5	Follow Up	Comment	Yes	The round 0 response for comment ID 908 states that erosion potential calculations will be provided in the IFC drawings, therefore we expect that BW Gold will commit to providing the IFC drawings as soon as possible. Stating that "IFC drawings may be provided to the LDN and UFN..." is not sufficient, we need that commitment.	BW Gold understands the concerns related to erosion risk and will provide a site-wide erosion potential map to be appended to the next revision of the SEPSCP. The sentence "*The erosion potential will be calculated for disturbance areas and included on the issued for Construction (IFC) drawings* " to state "*The site-wide erosion potential has been calculated and is included in Appendix B* ". The results of the assessment will be summarized in Section 6.2 of the plan. The word "potentially" will be removed from the sentence "*Where required, additional field truthing will be completed: test pits will be excavated to a maximum depth of 1.0 metres (hand-dug or using other means of excavation), and the soils will be characterized and analyzed for particle size, organic matter, structure and permeability* ." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated		LDN/UFN	BWG					RT; nov 30	Ready for Publishing
917	Appendix 9-A	Construction Sequencing	LDN/UFN		Jun 06, 2022	0			No	What are the qualifications of the EM that they are capable of adjusting ESC measures based on best field-fit?	The ESC professional is included under the EM role - see Table 3-1 where Environmental Monitors include Environmental Specialists (e.g., CPESC).	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
917	Appendix 9-A	Construction Sequencing	LDN/UFN		Jun 06, 2022	1	New		No	While the EM includes a CPESC specialist, their role description only includes tracking and reporting on environmental permit obligations, there is no mention of having the authority to adjust ESC measures. This should be added to table 3.	The Environmental Manager (EM) is responsible for day-to-day management of environmental programs, compliance with environmental permits, and updating the Environmental Management System and management plans. The EM or a designate (i.e.., Environmental Monitors) will have the authority to stop any construction activity that is deemed to pose a risk to the environment and allow work to proceed when the concern has been addressed or rectified - by definition, this includes adjustment of ESC measures.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
917	Appendix 9-A	Table 3-1	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Include the following under the EM role/responsibility "The EM or a designate (i.e.., Environmental Monitors) will have the authority to stop any construction activity that is deemed to pose a risk to the environment and allow work to proceed when the concern has been addressed or rectified - by definition, this includes adjustment of ESC measures."	The text quoted by the reviewer 'The EM or designate will have the authority to stop any construction activity that is deemed to pose a risk to the environment; work will only proceed when the identified risk and concern have been addressed and rectified' is currently included in the SEPSCP below Table 3-1 (Roles and Responsibilities). This table is meant to provide an overview rather than a comprehensive list. The suggested addition " ... by definition, this includes adjustment of ESC measures" to the previous sentence is implicit in the use of the word "rectified".		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
918	Appendix 9-A	Scheduled Monitoring	LDN/UFN		Jun 06, 2022	0			No	"Monitoring will occur weekly during spring freshet and monthly outside of freshet and in open water periods, as well as after each significant melt event or runoff-producing rainfall event. Effectiveness will be determined by the extent to which certain performance metrics are being achieved." Don't some measures require daily monitoring (e.g., rapid infilitration basins)?	Please note that visual monitoring of the Plant Site SCP is a requirement of Permit 110602 for the Early Works activities and therefore outside the scope of the current Application. BW Gold will conform with all requirements of the Early Works permit. The requirements in this plan supersede Early Works once Major Works construction begins.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
918	Appendix 9-A	Scheduled Monitoring	LDN/UFN		Jun 06, 2022	1	New		No	Original comment is referencing "Section 9.1 Scheduled Monitoring" to assess the effectiveness of the entire SEPSCP, not just early works activities or monitoring of the Plant Site SCP.	Section 9.1 of Appendix 9-A states that the monitoring frequency will depend on site conditions - an increase in contaminant concentrations in the receiving environment may require increased monitoring frequency.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
918	Appendix 9-A, Section 9.1	Scheduled Monitoring	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Weekly water quality monitoring is sufficient to meet the objectives of the plan: water quality monitoring frequency will be increased at the discretion of the Environmental Manager based on construction site monitoring and inspections, with frequency commensurate with the risk, nature, location, and timing (seasonality) of the work. Increased monitoring is indicated in Table 9-1 of Appendix 9-A for clear water conditions to document the change in turbidity (e.g., a change from background of 8 NTU for a duration of 24 hours will require multiple monitoring events over 24 hours; a change from background of 2 NTU at any one time for a duration of 30 days could require daily sampling).		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
918	Appendix 9-A, Section 9.1	Scheduled Monitoring	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up		No	Unresolved. The round 2 response did not indicate how the information provided in that response will be incorporated into the plan. Please indicate how you will update the plan with the information requested.	The information provided in the response is provided in Section 9.1 of Appendix 9-A. Section 9.1 states that "(t)he monitoring frequency will depend on site conditions: an increase in contaminant concentrations in construction runoff in the receiving environment may trigger changes in the monitoring program (i.e., increased monitoring frequency)". Site specific, or construction activity specific, activities may result in different monitoring frequencies. The base monitoring frequency established is at a minimum weekly monitoring, but as stated in Section 9.1 of Appendix 9-A this is subject to change to more frequent monitoring based on activity, site conditions, and risk factors. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups. The plan will be updated to incorporate the Round 2 response "Weekly water quality monitoring is sufficient to meet the objectives of the plan: water quality monitoring frequency will be increased at the discretion of the Environmental Manager based on construction site monitorng and inspections, with frequency commensurate with the risk, nature, location, and timing (seasonality) of the work."		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing
919	Appendix 9-A	Table 9-1	LDN/UFN		Jun 06, 2022	0			No	As discussed in Early Works, define a "significant runoff-producing rainfall event" - what parameters, who makes this call?	Please see Section 5.3.3 - "For the purpose of this plan, a significant rainfall event will be considered as greater than or equal to the 1 in 2 year return period rainfall." This will be measured through the on-site climate stations monitored by the on-site environment department. Triggers and actions for different storm events are also outlined in Section 9, Table 9-2.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
919	Appendix 9-A	Table 9-2	LDN/UFN		Jun 06, 2022	1	New		No	Since the environmental monitor is described as being the ESC certified professional, they should also be notified following a significant rainfall event. They should be included under the people notified by the EPC contractor in the minor, moderate, and major trigger columns in table 9-2.	It is expected that the Environmental Manager will be working closely with the Environmental Monitor(s) during these events - see Section 3 (roles and responsibilities). BW Gold will employ a qualified person as an EM - the EM will be supported by a staff of Environmental Monitors.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing

919	Appendix 9-A	Table 9-2/Table 3-1	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Update the SEPSCP to explicitly state that "significant runoff-producing rainfall events" are the 1 in 2 year rainfall events, and that the environmental monitor will be notified by the Environmental Manager when such a rainfall event occurs. It should be clear in table 3-1 that the Environmental Manager will be informing the Environmental Monitors of current site conditions that influence monitoring, there is no mention of this other than that the Monitors report to the Environmental Manager.	Thank you for your comment. BW Gold respectfully disagrees with the suggested revision and will not make the change, as this statement is currently in the plan - please see Section 5.3.3 - "For the purpose of this plan, a significant rainfall event will be considered as greater than or equal to the 1 in 2 year return period rainfall." Thank you for the recommendation to include in Table 3-1 the statement "Environmental Manager will be informing the Environmental Monitors of current site conditions that influence monitoring". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
920	Appendix 9-A	Scheduled Monitoring	LDN/UFN		Jun 06, 2022	0			No	Is there any monitoring required is materials in any ESC measures (SCPs, basins, etc..) are found to be acid generating or metal leaching?	Overburden will be used for construction purposes across the mine site as needed. PAG and metal leaching materials will not be used for construction of SCPs. Please see the ML/ARD Management Plan for a detailed description of the materials monitoring program.	No	LDN/UFN	Lorax	KP	??/Timo	AT/KP	Ready for Submission	GM; june 14	Ready for Publishing
920	Appendix 9-A	Scheduled Monitoring	LDN/UFN		Jun 06, 2022	1	New		No	Comment not addressed. See comment ID 14, 15, 77.	See response to Comment #912.	RT/TD to review	LDN/UFN	Lorax		??/Timo	AT/KP	Ready for Submission	GM; June 29	Ready for Publishing
920	Appendix 9-A	Scheduled Monitoring	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up		No	Unresolved. We request committment to add the details requested in the orginal comment and round 2 comment to the MP when it is updated.	See Round 3 response to Comment #912.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing
921	Appendix 9-A	Table 9-2	LDN/UFN		Jun 06, 2022	0			No	No mention of water sampling results. This table assumes no sedimentation into waterbodies - this is best case scenario, but the TARP should include all possible events. Please update to include roles and responsibilities - including reporting requirements - if water quality guideline exceedances are observed and if sediment is released into a waterbody.	Section 9.1 discusses the actions to be conducted in the event that turbidity and/or TSS limits in Table 9-1 are exceeded in a waterbody. Roles and responsibilities for site personnel are also described in this section.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
921	Appendix 9-A	Table 9-2	LDN/UFN		Jun 06, 2022	1	New		No	This section describes stopping work if water quality sampling indicates water quality guideline exceedances and initiate additional mitigations actions, what are these additional mitigation actions? Although roles and responsibilities are described in section 9.1, they should be included in the TARP as well, either within the major trigger category or if they fit better in a separate column.	Section 11.2 of Appendix 9-A notes that the design of the ESC measures is a flexible process that responds to new information throughout the construction phase - contingency strategies will be active and adaptive - it is not possible to list every potential event and mitigation measure. Roles and responsibilities are included in the first column of Table 9-2 (Incident Monitoring Triggers and Actions).	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	CB; 17-Jun	Ready for Publishing
921	Appendix 9-A	Table 9-2	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Response did not answer the question. Exceeding water quality guidelines is a very real possibility and the Nations want to ensure BW Gold has a plan to deal with this situtation. These mitigations do not need to be overly specific since exceedances will be case-dependent, however we expect some mitigations to be fleshed out before BW Gold exceeds water quality guidelines.	Thank you for your comment. BW Gold respectfully disagrees with the suggested revision to "flesh out" mitigation measures, Section 7.3 of the plan describes erosion and sediment control measures and best management practices that can be implemented, and the applicability of each measure (i.e., typical uses or intent for each ESC measure described). BW Gold understands the concern related to water quality in the receiving environment and has identified a plan to deal with potential exceedances - please see Section 9.1 - "If the elevated turbidity level is valid and is a result of construction activities, the Environmental Monitor will inform the Project Engineer or Environmental Manager, who shall cease all work that may have a direct or indirect impact on water quality, and immediately initiate additional mitigation actions."		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
921	Appendix 9-A	Table 9-2	LDN/UFN (Mikayla Davis)		Sep 01, 2022	3	Follow Up		No	We acknowledge it is hard to predict additional mitigation measures until the problem arises, however we need assurance that BW have the necessary equipment/materials to build these emergency mtitigation structures should they be needed. Without these materials/equipment readily available and planned for, the threat to water quality is severe even with a stop work order. Please provide a list of materials/equipment that will be readily available on site to build these structures.	BW Gold will maintain an inventory of ESC measures and BMPs, similar to that described in Section 7.3 of Appendix 9-A, to be available on site for rapid implementation if deemed necessary by the EM based on site conditions and results of monitoring/inspections of performance of planned BMPs. This may include BMPs that can be installed or implemented quickly and efficiently, such as flocculants, straw bales, slope drains, filter bags, silt retention structures, mulch, RECPs and polyethylene covers. The commitment to maintain materials on site is already included in Section 11.2 "An inventory of ESC materials will be kept on site to address problems that may arise. The inventory list will be updated regularly to reflect a more accurate estimate of the quantities that should be stocked on site. The materials will provide a spectrum of measures to address a broad range of site conditions and severity."		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD	Ready for Publishing
921	Appendix 9-A	Table 9-2	LDN/UFN (Mikayla Davis)		Oct 06, 2022	4	Follow Up		Yes	The reviewers requests ongoing consultation with LDN and UFN on the inventory list, we would like to review the detailed list at this point and any updates made to it in the future.	LDN and UFN will be engaged on on the erosion control measures inventory list at site through several forums (non-exhaustive list): -IEM inspection reports, monthly meetings -Involvement of UFN and LDN env monitors in project construction, operations, closure and post-closure and subsequent reporting -Site updates during EMB meetings -Periodic reviews of the various ESCP plans through the EMC -ESCP Management Plan reporting		LDN/UFN	BWG		Travis		Ready for Submission	TD, Oct 19	Ready for Publishing
922	Appendix 9-A	Evaluation and Adaptive Management	LDN/UFN		Jun 06, 2022	0			No	"Sediment removal and proper disposal will be performed as required" - this is not discussed in this document. What triggers removal? Who is responsible? Add to TARP. What is proper disposal? What testing of materials must be conducted prior? Where are the designated disposal sites? Same sentence is repeated in Section 11.1.	-	No	LDN/UFN	Lorax		Meghan/Stephanie	GM	Ready for Submission	GM; june 17	Ready for Publishing
922	Appendix 9-A	Evaluation and Adaptive Management	LDN/UFN		Jun 06, 2022	1	New		No	Sediment removal and proper disposal should not be limited to sediment basins, but also include silt fences, ditches, culverts, and sediment control ponds. Referencing "personnel as outlined in Section 8" does not seem specific enough, it is unclear who will be responsible. The sediment that is "suitable" will be used for grading material - how is "suitable" defined in this situation? What will be done with material that is not suitable? Other outstanding comments include: What is proper disposal? What testing of materials will be conducted prior? Where are the designated disposal sites (for sediment that is not suitable for use as grading material)?	See response to Comment #912.	RT/TD to review	LDN/UFN	Lorax	KP	Meagan/Stephanie	GM	Ready for Submission	GM; June 28	Ready for Publishing
922	Appendix 9-A	Evaluation and Adaptive Management	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Response only partially addresses the comment. Will sediment removal be conducted at silt fences, ditches, culverts, and sediment control ponds? Who is responsible for this work? make reference to a specific position under section 8, not the whole section. How often will this be conducted or what will trigger sediment removal?	Section 11.1 (Evaluation and Adaptive Management) notes that silt fences, ditches, culverts, and sediment control ponds will be visually inspected for excess sediment build-up, and maintenance (i.e., removal of sediment) will be carried out as necessary. The personnel responsible for the inspections and maintenance activities are clearly listed in this section of the plan and will not be repeated here.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT: Aug 12	Ready for Publishing
923	Appendix 9-A	Evaluation and Adaptive Management	LDN/UFN		Jun 06, 2022	0			No	Add to bulleted list: evidence of erosion / scour - add to bulleted list in Section 11.1.	The first bullet of the list in Section 11.1 currently includes for this request: "Initial erosion will be inspected visually by searching for light surface material (litter or soil) movement, while sedimentation resulting from erosion will be determined by searching for deposition of soil particles at the bottom of slopes and depressions. Riling, gullying, pedestalling, and unusual compaction are also indicators of erosion and will be recorded if, and when, observed."	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
923	Appendix 9-A	Evaluation and Adaptive Management	LDN/UFN		Jun 06, 2022	1	New		No	Scour has not been added, please explicitly provide this in text.	Excessive sediment build-up (included in the list) is a result of increased erosion/scouring.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
924	Appendix 9-A	Pond Design Report	LDN/UFN		Jun 06, 2022	0			No	Include more detail on what will be included in SCP Design Report when completed (e.g. requirements in Section 4. of "Assessing the Design, Size, and Operation of Sediment Ponds Used in Mining")	This information will be included in the updated plan.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		

924	Appendix 9-A	Pond Design Report	LDN/UFN		Jun 06, 2022	1	New		No	No additional information has been added to section 7.3.1.1 from the Nov 2021 to March 2022 version. Not sure if additions were made from the September 2021 version to the Nov 2021 version... Please add?	Additional detail was added to Section 7.3.1.1 of Appendix 9-A following submission of version A.1 of the plan in September 2021. The following text was included: "Predicted discharge frequency and duration will be included for each pond (e.g., intermittent, continuous, or only when impounded water quality meets discharge criteria set out in Table 9-1; see Section 9)."	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
925	Appendix 9-A	Erosion control for soil stockpiles	LDN/UFN		Jun 06, 2022	0			No	More specific mention and detail required for erosion control for soil stockpiles needed in Section 7.3 (Requirement Description from JAIR).	The strategy, procedural controls, and BMPs noted in Section 7.1 through 7.3 will be followed for all topsoil stockpiles. The Soil Management Plan (Chapter 9.3) provides additional detail on erosion control measures for topsoil stockpiles, which includes: avoiding locating stockpiles in runoff pathways to ditches or watercourses to reduce the risk of sedimentation; seeding stockpiles with non-propagating grass species, native grasses and forbs, and planting with tree and shrub species; using berms, waterbars and ditches to direct runoff away from rivers and streams; installing silt fencing, straw wattles and check dams for additional sediment capture.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
925	Appendix 9-A	Erosion control for soil stockpiles	LDN/UFN		Jun 06, 2022	1	New		No	This response should be included in section 7.3 and reference made to The Soil Management Plan.	To reduce duplication, mitigation and monitoring measures for soil stockpiles are not included in both plans.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
925	Appendix 9-A	Erosion control for soil stockpiles	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Section 2 does not reference the Soil Management Plan as needing to be read in conjunction. If you expect this comment to be resolved, make reference to it.	The SEPSCP will be updated to include reference to the Soil Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie		Ready for Submission	KP, Aug 13	Ready for Publishing
926	Appendix 9-A	Training	LDN/UFN		Jun 06, 2022	0			No	Include more detail on what information training will cover (similar to what was provided in the Soil MP).	Note that the training and awareness activities included in the Soil Management Plan are directed at employees and contractors who may not be qualified professionals - the purpose of the program is to give them a basic level of environmental awareness and understanding. In contrast, the staff and subcontractors responsible for the management, implementation, oversight, monitoring and reporting of both soil salvaging and appropriate ESC measures will be QPs and have relevant experience commensurate with their roles and responsibilities. As such, training and awareness activities will be focused on any sensitive features in the construction area rather than on installation and monitoring methods, for example.	No	LDN/UFN	BWG		Travis	TD	Ready for Submission	15-Jun-22	Ready for Publishing
926	Appendix 9-A	Training	LDN/UFN		Jun 06, 2022	1	New		No	While it is acknowledged that QPs will have previous experience, Artemis should be providing training/reminders of ESC measures on a regular basis. Please include detail on this training and timing. **Same as comment ID 21.**	Refer to comment response 914.	No	LDN/UFN	BWG		Travis	TD	Ready for Submission	TD, 15-Jun	Ready for Publishing
926	Appendix 9-A	Training	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Same as comment ID 914: Please incorporate this commitment into the SEPSCP "ESC refresher training will be provided annually to site staff (likely the month prior to the onset of spring freshet) involved in installation, monitoring, inspections and replacement of ESC measures. ". Additionally we want a commitment for the training packages to be reviewed at the Life of Mine Committee in the SEPSCP.	Please refer to response to comment 914		LDN/UFN	BWG		Cole	TD	Ready for Submission	TD; Aug 11	Ready for Publishing
927	Appendix 9-A	Sensitive features	LDN/UFN		Jun 06, 2022	0			No	Add: clearly outline sensitive features in the receiving environment and how triggers will be employed to determine how the visual assessment of the Plant Site SCP outlet will work	The early Works activities are described in detail in the Early Works Joint Mines Act/Environmental Management Act Permits Application (BW Gold Ltd., February 2021). Subsequent to the Early Works plan and in consultation with reviewers, it was agreed that the Plant Site SCP will be designed to discharge to Rapid Infiltration Basins rather than to ground. Monitoring for sensitive features and visual assessment downgradient of the outlet are therefore no longer required. The requirements in this plan supersede Early Works once Major Works construction begins.	No	LDN/UFN	KP		Stephanie	AT/KP	N/A		
927	Appendix 9-A	Sensitive features	LDN/UFN		Jun 06, 2022	1	New		No	Response about monitoring for sensitive features is noted - however a response to the original comment "how triggers will be employed to determine how the visual assessment of the Plant Site SCP outlet will work" is not provided. "*The permitee must conduct visual monitoring of the Sediment Control Pond daily while discharging to the Rapid Infiltration Basins. The permitee must conduct visual monitoring of the Rapid Infiltration Basins daily when there is effluent in the basins. Visual monitoring must include monitoring for adequate infiltration in the Rapid Infiltration Basins and monitoring for seepage, overland flow, and erosion in the area outside the Sediment Control Pond and Rapid Infiltration Basins.*"	The Mines Act Permit for Early Works activities and the Early Works Erosion and Sediment Control Plan outline monitoring measures for the Plant Site SCP and RIBs. This information will not be duplicated in Appendix 9-E.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
927	Appendix 9-A	Sensitive features	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	There is no mention of monitoring requirements for the Rapid Infiltration Basins in the Early Works Permit. As such, include it in the SEPSCP. This is a reoccuring problem with management plans, your response forces us to go search through a seperate document since the section is not provided, only to find that it is not included. Please check these documents yourselves before providing such responses and include the section so we aren't spending time tracking it down.	The plant site SCP and RIBS will now be utilized in the construction phase - the SEPSCP will be updated to incorporate monitoring requirements for these facilities. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie		Ready for Submission	KP, Aug 13	Ready for Publishing
928	Appendix 9-A	Construction	LDN/UFN		Jun 06, 2022	1	New		No	"In the initial construction area, Davidson Creek will be diverted around the site along the north bank. Two options are proposed: pumping or a diversion channel." Only the diversion is described, include a description of the pumping option. Which of these options will be used, and what assessments will be done for that selection? When does BW Gold anticipate making that decision?	Appendix 9-A provides a brief summary of construction activities and options. Please see Appendix 3-J (TSF Stage 1 Detailed Design Report) for information on the selected option and relevant design details. The selected option was the pumped diversion and only the final design for this system is presented in the design report.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
928	Appendix 9-A 2.1.1	Construction	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Again, please provide what section in Appendix 3-J is being referenced, this is a 300 page document. Since the selected option was the pumped diversion, this should be described in the SEPSCP. Or at a minimum the section in Appendix 3-J referenced and edits make to clear why the pumped diversion was chosen.	Please see Section 4.2. of the TSF Stage 1 Detailed Design Report (Appendix 3-J); this section is titled "Davidson Creek Diversion System". Section 4.2.3.2 Primary Outlet describes the pumping system. The pumping system was selected primarily to allow the diversion system to remain active until the start of ore processing, if required. BW Gold recognizes that management plans may need various updates as a result of final design detailing and permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups. The SEPSCP will be updated at the appropriate time to clarify that the diversion will be done by pumping , but will not include the rationale for this, as it is not relevant to this plan.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
929	Appendix 9-A	Operations	LDN/UFN		Jun 06, 2022	1	New		No	If a severe erosion event occurs (significant precipitation) will the ditches along mine site haul roads and access roads be maintained as needed? Plan only mentions doing this maintenance annually, however an inclusion of maintenance following significant erosion events should be added to meet M-246 permit condition part B.5.	Please see Table 9-2 (Section 9.2) of Appendix 9-A, which summarizes incident monitoring triggers and actions. Please also see Section 11 of Appendix 9-A: "The Construction Personnel/Sub-Contractors and Environmental Monitor will inspect all erosion control measures weekly during spring freshet and monthly outside of freshet and in open water period, as well as after each significant runoff-producing rainfall event. Silt fences, sediment traps/basins, ditches, culverts, and sediment control ponds will be visually inspected..." BW Gold will comply with all conditions of the Mines Act and EMA Permits.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
930	Appendix 9-A	Operations	LDN/UFN		Jun 06, 2022	1	New		No	What is meant by "The Lower Waste Stockpile will be completed in Y+11; however this material is earmarked for reclamation purposes and therefore the stockpile will not be progressively reclaimed."? Including some detail on what the reclamation purpose entails would be helpful.	Please see Chapter 4 of the Application for a description of reclamation and closure activities. The sentence "The Lower Waste Stockpile will be completed in Y+11; however this material is earmarked for reclamation purposes and therefore the stockpile will not be progressively reclaimed." means that overburden from the Lower Waste Stockpile will be rehandled from the stockpile and used for reclamation of other mine facilities. Therefore, the Lower Waste Stockpile will not be reclaimed until after all material has been rehandled for use in mine site reclamation purposes, at the end of the active closure/reclamation period (in contrast to the Upper Waste Stockpile, which will be progressively reclaimed during the operations phase of the Project).	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
930	Appendix 9-A	Operations	LDN/UFN		Jul 22, 2022	2	Follow Up	Clarification	No	Reword that section, to add more detail for clarification. It is not clear what the implications of that statement are for the stockpile.	Thank you for your comment. BW Gold disagrees with the suggested revision and will not make the change, as the current wording sufficiently outlines the implications for the stockpile.		LDN/UFN	KP		Stephanie		Ready for Submission	CB; July 29	Ready for Publishing

931	Appendix 9-A	Erosion and sediment control measures	LDN/UFN		Jun 06, 2022	1	New		No	It would be helpful to outline which ESCs in section 7 will address condition 3.1 in the federal DS, as there is no mention of avoiding the deposition of deleterious substances in water frequented by fish in section 7.	The overall purpose of the SEPSCP is to avoid deposition of deleterious substances in the receiving environment - see Section 2 of Appendix 9-A "Movement of eroded soil off the site associated with actions of water, wind, or ice, has the potential to impact water quality if unmitigated" and "The overall objective of the SEPSCP is to manage contact water within the Project footprint, so as to prevent runoff from potentially impacting adjacent watercourses." As noted in Section 7.1 of Appendix 9-A, "Erosion and sediment control measures applied in series create a resilient system capable of protecting the natural environment from sediment impacts" - that is, one or more of the BMPs summarized in Section 7.3 of Appendix 9-A will be used to avoid the deposition of deleterious substances in water.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
932	Appendix 9-A	Best management practices	LDN/UFN		Jun 06, 2022	1	New		No	"Specific measures to be implemented for each work area will be identified in the field prior to the construction activity". Have measures been identified for the plant site? They should be identified soon if construction is planned to commence this spring 2022.	The Early Works Erosion and Sediment Control Plan (EWESCP) outlines the measures to be implemented for the Plant Site. BW Gold received Mines Act Permit M-246 approving the Early Works Program in June 2021, and EMA Permit 110602 for early-stage construction activities.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
933	Appendix 9-A	Sediment control ponds	LDN/UFN		Jun 06, 2022	1	New		No	As described in section 4.3 "The Permittee must ensure that surface water ponds, ditches and diversion channels are designed to convey the design flood without overtopping, without side slope failure, and with adequate armour or lining to prevent significant erosion." What measures are put in place to prevent side slope failure of SCP? Will a lining or armour be used in the SCP?	The internal and external side slope angles of the sediment control ponds were selected to prevent side slope failure. Slope stability assessments for the ponds are presented in Appendix 3-N and Appendix 3-Z of the Application. Slope lining and/or armoring design details will be dependent on the structure use, design preferences and materials available at the time that construction is planned. Refer to the design reports for site-specific design details for the various ponds. Final design details will be presented on the Issued-for Construction design drawings prior to construction, as required by Part 10.5.1 of the Code.	RT/TD to review	LDN/UFN	KP		Michael	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
933	Appendix 9-A	Sediment control ponds	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	What sections of appendix 3-N and 3-Z are you referencing here, there are over 500 pages and we do not have the time to sift through them. We request a commitment in the SEPSCP from BW Gold that final designs will be reviewed with the Life of Mine Committee.	The various channels and sediment control ponds (SCPs) incorporate site specific details for flood conveyance, side slope specifications, lining and armouring details for the channels and SCPs. It is impractical and repetitive to describe these details in this comment response table and the details are contained in the referenced reports. The slope stability assessments for the ponds are presented in Appendix 3-N (Appendix C3) and Appendix 3-Z (Chapter 8). Design details are presented on the design drawings contained in Appendix 3-N (Appendix D). The designs are presented in the Application. BW Gold disagrees with the suggested revision to the management plan is necessary and will not make the change.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
934	Appendix 9-A	Permit conditions	LDN/UFN		Jun 06, 2022	1	New		No	In section 2.1.2 waste rock and overburden storage facilities, low grade ore stockpile, and topsoil stockpiles are described as needing ESC measures (i.e.., collection ditches, sediment control ponds). However, in section 7, SCP and collection ditches are not proposed to be implemented at any of the soil, overburden, and rock stockpiles. Is this discussed in another plan?-please reference it. Without a discussion of ESC measures at the numerous stockpiles and regular inspection, BW Gold does not meet the M-246 permit condition (part B geotechnical 3.): "The Permittee must ensure that all soil, overburden, and rock stockpiles are constructed in accordance with designs prepared by a Professional Engineer, unless exempt in writing from the Chief Permitting Officer, and are constructed and inspected to ensure stability and erosion control is maintained."	Please see the Purpose and Objectives section of Appendix 9-A: "The SEPSCP describes best management practices (BMPs) that will be implemented – it is not meant to be prescriptive. Specific measures to be implemented for each work area will be presented on detailed design drawings prepared for construction." The SEPSCP does not cover the specific geotechnical and water management designs - please see the appendices to the Application, including but not limited to, Appendix 3-J (TSF Stage 1 Detailed Design Report), Appendix 3-K (Tailings Storage Facility Life of Mine Design Report) and Appendix 3-N (Stockpiles Geotechnical and Water Management Design Report) for additional details.	No	LDN/UFN	KP	BWG	Dan	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
934	Appendix 9-A	Permit conditions	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Again what sections in appendices for chapter 3 are being referenced? We request a commitment in the SEPSCP from BW Gold that final designs will be reviewed with the Life of Mine Committee.	The design of the collection/diversion channels and sediment control ponds (SCPs) for the stockpiles are presented in Appendix 3-N and Appendix 3-Y of the Application. Design details for the LGO Stockpile, Lower Waste Stockpile, and topsoil stockpiles are presented in Sections 4, 5, and 6 of Appendix 3-N, respectively. The design drawings are contained in Appendix D of Appendix 3-N. Section 9 of Appendix 3-N contains monitoring and operational requirements for the stockpiles. Appendix 3-Y covers the water management design for the Upper Waste Stockpile. The designs are presented in the Application. BW Gold disagrees with the suggested revision to the management plan is necessary and will not make the change.		LDN/UFN	KP	BWG	Stephanie	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
935	Appendix 9-A	Permit conditions	LDN/UFN		Jun 06, 2022	1	New		Yes	Section 4.3 describes a M-246 permit condition that is related to the ESP: "The Permittee must ensure that borrow and quarry excavations are constructed in accordance with designs prepared by a Professional Engineer and are constructed and inspected to ensure stability and erosion control is maintained." Burrow pits and quarry excavations are not mentioned elsewhere in this plan. Are they expected to be constructed during the life of mine? If so, they should be described in the SEPSCP.	Borrow Pits and Aggregate Sources are described in Chapter 3 of the Application and are shown on the General Arrangement figures in that section. The SEPSCP (Appendix 9-A of the Application) does not include a comprehensive list or description of all mine components. However, the plan strategies and measures apply to the entire mine site and all associated activities.	No	LDN/UFN	KP		Stephanie/Dan	AT/KP	Ready for Submission	KP, June 20	Ready for Publishing
935	Appendix 9-A	Permit conditions	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	Yes	Since there is a specific condition related to burrow and quarry excavations and erosion control, they should be included within the SEPSCP. Chapter 3 describes the construction of them, and includes nothing on erosion control for them. It is important that they are mentioned in the SEPSCP so the Nations know BW Gold has the commitment to conduct erosion control on these sites. Further the SEPSCP does not specifically state that all measures will be applied to the "entire mine site and all associated activities", therefore we cannot conclude this is the case.	Thank you for your comment; this change will be made. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie		Ready for Submission	CB; July 29	Ready for Publishing
936	Appendix 9-A	Permit conditions	LDN/UFN		Jun 06, 2022	1	New		Yes	Are the following conditions contained within the Mine Site Water and Discharge Monitoring and Management Plan? If so please reference where in this plan. Permit M-246, conditions 3 and 5 (part C).	This response assumes that the reviewer meant the Surface Erosion Prevention and Sediment Control Plan (SEPSCP) (Appendix 9-A of the Application), rather than the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E), as Condition 3 of the early construction works permit applies to Soil, Overburden and Rock stockpiles, while Condition 5 applies to Mine Site Roads and assurances that the facilities are constructed in accordance with designs prepared by a Professional Engineer to ensure that stability and erosion control are maintained. The SEPSCP does not include a comprehensive list or description of all mine components. However, the plan's strategies and measures outlined within the plan apply to the entire mine site and all associated activities. BW Gold will comply with all permit conditions.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
937	Appendix 9-A	Permit Conditions	LDN/UFN		Jun 06, 2022	1	New		Yes	While section 12 outlines that the SEPSCP will be reviewed annually, there is no mention of the early works erosion and sediment control plan being reviewed annually and updates reported in the annual reclamation report. This information is not provided in the early works erosion and sediment control plan either. Please add to the SEPSCP to comply with M-246 permit condition 5b (part C).	BW Gold will comply with all of the Early Works permit conditions. This Application is for permit amendments authorizing the construction and operations phases of the mine; the SEPSCP for construction and operations will supersede the Early Works erosion and sediment control plan.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
937	Appendix 9-A	Permit Conditions	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	Yes	Request comment from MMO to say whether this is acceptable or not.	ENV approved the updated Early Works ESCP in accordance with EMA permit 110602 on April 1, 2022. The EW's ESCP will only be in force until the major works permit is issued at which point the major works permit and major works SEPSCP will supercede the EW's ESCP. Therefore an annual update of the EW's ESCP is not anticipated as the plan was just approved in April 2022. With that being said, the EAC Condition 13 CEMP also contains sediment and erosion control mitigations and BWG will ensure that this plan is concurrently implemented along with the EW's ESCP for early works activities and that if there are are any disagreements between the two plans, the more stringent mitigations or monitoring will be followed.		LDN/UFN	BWG	ERM	Travis	TD	Ready for Submission	TD; Aug 11	Ready for Publishing

938	Appendix 9-A	Permit condition & Revegetation	LDN/UFN		Jun 06, 2022	1	New		Yes	Section 7.3.14 states that "exposed slopes and other temporarily disturbed areas will be seeded for initial soil stabilization… the purpose of temporary seeding is to stabilize the soil and reduce damage from wind and/or water until permanent stabilization is accomplished." This section should include seeding stockpiles to comply with M-246 condition 6e (part C). What seeding mix will be used for permanent stabilization? How long does temporary seeding intend to last?	BW Gold will comply with all of the Early Works permit conditions - this Application is for permit amendments authorizing the construction and operations phases of the mine; the SEPSCP for construction and operations will supersede the Early Works erosion and sediment control plan. Stockpile BMPs are described in Section 10.4 of the Soil Management Plan (Appendix 9-B of the Application).	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
938	Appendix 9-A	Permit condition & Revegetation	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	Yes	Response does not address the comment. It is not clear if temporary seeding or permanent seeding will be used. Is the seeding mix for permanent seeding also being used for temporary seeding, or is it different? Again, how long does temporary seeding intent to last?	Section 7.3.14 of Appendix 9-A is titled "Temporary Seeding". This plan does not address permanent seeding. BW Gold respectfully disagrees with the suggested revision to include a discussion of permanent seeding and will not make the change - the reviewer is referred to Section 10.4 of the Soil Management Plan (Appendix 9-B) for a description of soil stockpile seeding and to Section 4.2.2.3 of Chapter 4 of the Application for a discussion of permanent seeding mixes. The intended duration of time for temporary seeding will be site and activity specific.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
938	Appendix 9-A	Permit condition & Revegetation	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up	comment	Yes	Add detail to 7.3.14 indicating the information provided in the round 2 response, including adding references to the other sections indicated for permament stabilization and stockpile seeding.	Acknowledged. Section 7.3.14 (Temporary Seeding) will be updated to refer readers to Section 10.4 of the Soil Management Plan (Appendix 9-B) for a description of soil stockpile seeding and to Section 4.2.2.3 of Chapter 4 of the Application for a discussion of permanent seeding mixes, and will note that the intended duration of time for temporary seeding will be site and activity specific. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	TD, Sept 13	Ready for Publishing
939	Appendix 9-A	Revegetation	LDN/UFN		Jun 06, 2022	1	New		No	What growth medium will be used prior to re-vegetation?	As noted in Section 2.1.3 of the SEPSCP (Appendix 9-A), Reclamation activities are described in Section 4 of the Application. Re-vegetation is not a BMP included in this plan.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
940	Appendix 9-A	Permit conditions	LDN/UFN		Jun 06, 2022	1	New		Yes	"The Permittee must reclaim all surface water management ponds and water diversions to satisfy stability and erosion control requirements and the approved end land use once no longer required." Where is the following condition met? Does not appear to be met in this plan, will it be addressed in the End Land Use Plan?	This SEPSCP has been developed to proactively manage water, erosion and sedimentation throughout all phases of the Project, with a focus on the Construction phase. The Reclamation and Closure Plan is included in Chapter 4 of the Application (see Section 4.2.2.3 Erosion and Sediment Control).	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
940	Appendix 9-A	Permit conditions	LDN/UFN		Jul 22, 2022	2	Follow Up	Information Requirement	Yes	Chapter 4, Section 4.2.2.3 does not provide any detail as to the reclamation of surface water management and water diversions, it simply states that sediment controls are required during the initial stages of reclamation until vegetation is established. No description of the reclamation of these features. Add information to this plan, outlining how/when these ESC features will be reclaimed or if they will be reclaimed.	Chapter 4, section 4.2.2.3 does very much indeed provide specific detail as to the reclamation of surface water management and water diversions. Please refer to Section 4.2.2.3 of the Chapter 4 Reclamation and Closure Plan, which states the following: *The primary mechanisms of erosion management and sediment control will consist of stabilizing land surfaces to minimize erosion by resloping and reshaping landforms to their final configuration, establishing vegetation cover and reclaiming the final surfaces in accordance with this Plan, establishing diversion and collection ditches to manage surface water runoff, and restoring natural hydrological regimes to minimize sediment transport to downstream environments. Rapid establishment of vegetation and development of self-sustaining ecosystems on erosion-prone landforms during Closure and Post-closure phases will be an important component of long-term erosion control.* An example of a potential native species seed mix that could be used on site is: - 71%26 slender wheatgrass (Elymus trachycaulus); - 21% Rocky Mountain fescue (Festuca saximontana); - 5% tufted hairgrass (Deschampsia caespitosa); and - 3% northern sweetvetch (Hedysarum boreale). Furthermore, Section 4.2.2.4 of Chapter 4 states: *An integral component of meeting reclamation and closure objectives is to design site drainage to be consistent with the surrounding landscape. This component will assist with stabilizing soil and preventing erosion. Re-establishing as many pre-disturbance drainage pathways as possible for the post-closure phase assists in achieving these objectives. Another approach is to align new upstream drainage pathways with existing downstream drainages* . The section then goes on to explain specific deactivation and decomissioning prescriptions for specific water managenment features such as the northern diversion and central diversion. Sections 4.2.3 and 4.2.3.1 go on to to explain both the revegetation stragegy and species selection. This is the process (outlined in those specific sections) that would be followed for all reclamation of surface water management and water diversions. Furthermore, these prescriptions will be periodically refined throughout the LoM through the outcomes of the reclamation research outlined in Section 4.2.5 Reclamation research with specific attention being paid to the FWR, NCC and TSF in section 4.2.5.1.		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD, Aug 11	Ready for Publishing
941	Appendix 9-A	Permit conditions	LDN/UFN		Jun 06, 2022	1	New		Yes	"The permittee must conduct visual monitoring of the Sediment Control Pond daily while discharging to the Rapid Infiltration Basins. The permittee must conduct visual monitoring of the Rapid Infiltration Basins daily when there is effluent in the basins. Visual monitoring must include monitoring for adequate infiltration in the Rapid Infiltration Basins and monitoring for seepage, overland flow, and erosion in the area outside the Sediment Control Pond and Rapid InfiltrationBasins. Daily inspections must be recorded and maintained on site for three years and must be made available to Ministry staff upon request." The following condition has not been met, daily monitoring of sediment control ponds and rapid infiltration basins in not stated in either the SEPSCP or the Mine Water and Discharge Monitoring and Management plan. Monitoring is only discussed as "when discharging". Please update to comply with this condition.	BW Gold will comply with all of the Early Works permit conditions. This Application is for permit amendments authorizing the construction and operations phases of the mine; the SEPSCP for construction and operations will supersede the Early Works Erosion and Sediment Control Plan.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
941	Appendix 9-A	Permit conditions	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	Yes	There is no mention of monitoring requirements for the Rapid Infiltration Basins in the Early Works Permit. As such, include it in the SEPSCP.	Section 6.0 Environmental Monitoring and Reporting of the approved EW's ECSP (approved by ENV as per EMA permit 110602 on April 1, 2022) contains a comprehensive monitoring and TRP program for the the Rapid Infiltration Basins in the Early Works Permit. These requirements will be carried forward in a subsequent revision of the SEPSCP. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD; Aug 11	Ready for Publishing
942	Appendix 9-A		LDN/UFN		Jun 06, 2022	1	New		No	None of these definitions include the stripping and stockpiling of mineral soil and OVB as defined in the Soil Management Plan (SMP) or Reclamation and Closure Plan (RCP, Chapter 4). This should be updated and reflected here.	Section 6.1 of Appendix 9-A lists construction activities that have the potential to cause erosion and sedimentation; both stripping and stockpiles are included in this list. How activities are defined and described will differ between plans. These activities, as described in the SEPSCP, are sufficient to inform the strategies and BMPs included in this plan.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
943	Appendix 9-A	Section 7.1	LDN/UFN		Jun 06, 2022	1	New		No	How will baseline conditions be documented? What parameters will be measured?	Please see Section 6.2 of Appendix 9-A, which describes the baseline conditions and erosion risk potential that will be used to determine the BMPs to be implemented. The parameters to be measured are listed as soil erodibility, slope length, slope steepness and vegetation.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
943	Appendix 9-A	Section 7.1	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Same as comment ID 908.	Thank you for your comment. Please see the Response to follow-up comment 908.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	CB; July 29	Ready for Publishing
944	Appendix 9-A	Section 7.3.1.2	LDN/UFN		Jun 06, 2022	1	New		No	"The outlet will be checked regularly for sediment build-up that could prevent drainage and limit the overall carrying capacity of the basin." Please define "regularly" - a defined schedule would be valuable for this monitoring. Same comment for collection ditches, rock check dams, etc... as well.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
944	Appendix 9-A	Section 7.3.1.2	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	It is our understanding that chapter 9 plans will be updated, we cannot mark this comment as resolved until we see an updated SEPSCP with the revisions.	Monitoring schedule and activities are described in Section 11.1 of Appendix 9-A (Onsite Inspection and Plan Review).		LDN/UFN	KP		Stephanie		Ready for Submission	KP, Aug 13	Ready for Publishing

945	Appendix 9-A	Section 7.3.7	LDN/UFN		Jun 06, 2022	1	New		No	Energy dissipator or dissipater? Spelling is inconsistent.	Dissipator is the correct spelling. Apologies for the inconsistency.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
945	Appendix 9-A	Section 7.3.7	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	We expect the error to be corrected in the updated SEPSCP.	Spelling inconsistencies will be addressed in the revised SEPSCP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP		Stephanie		Ready for Submission	KP, Aug 13	Ready for Publishing
946	Appendix 9-A	Section 7.3.14	LDN/UFN		Jun 06, 2022	1	New		No	"Fertilizers and hydroseeding containing fertilizers will not be used near watercourses" Will there additional measures (e.g. diversion channels) for these areas as well to ensure fertilizer runoff does not enter waterbodies?	Diversion channels downstream of areas to be fertilized will not be installed in order to minimize unnecessary disturbance, especially near watercourses.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
946	Appendix 9-A	Section 7.3.14	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Clarification	No	What mitigations measures will be used to ensure fertilizer runoff does not enter water bodies then?	As per section 7.3.14 of the SEPSCP, the plan states that areas to be temporarily seeded are areas that would be subject to erosion for more than 30 days, and are usually accompanied by surface preparation, fertilizer, and mulch; however, the timing of seeding is weather and season dependent and consequently this method is not applicable at all times. Consequently, seeding would be avoided during spring freshet where fertilizer would be more susceptible to runoff. Hydroseeding, which involves the use of a tackifier to prevent seed, fertilizer and mulch running off will be used on steep slopes (>2:1) that are highly susceptible to erosion. Fertilizers and hydroseeding containing fertilizers will not be used near watercourses (within 30 m of the top of bank). These mitigations along with conventional ESC measures such as silt fencing, hay bales and multi-barrier approaches are the measures that will be used to ensure fertilizer runoff does not enter water bodies.		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD, Aug 11	Ready for Publishing
946	Appendix 9-A	Section 7.3.14	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up	comment	No	Qustion not answered. Will fertilizer be used near water bodies? Please describe additional mitigations or alternatives. Also include the information provided in your responses in an updated plan.	It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
946	Appendix 9-A	Section 7.3.14	LDN/UFN (Christina Delaney)		Oct 06, 2022	4	Follow Up	Comment	Yes	I acknowledge that you provided some general information surrounding this topic, but the question was not addressed. Please answer yes/no and include a framework for determining if, when, where and how fertilizer will and will not be applied near waterbodies. A memo is requested that outlines these details and commitment to include the details in an updated plan is requested.	It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG				19-Oct-22	TD, Oct 20	Ready for Publishing
946	Appendix 9-A	Section 7.3.14	LDN/UFN		Oct 31, 2022	5	Follow Up	Comment	No	Require a memo concerning fertilizer use and mitigations near water bodies	Please see "R5_LDN UFN_Comment ID 946.pdf"		LDN/UFN	BWG					RT; Nov 25	Ready for Publishing
946	Appendix 9-A	Section 7.3.14	LDN/UFN (Christina Delaney)		Dec 01, 2022	6	Follow Up	Comment	No	unresolved. answer not provided. Please answer 'no' and include a framework for determining if, when, where and how fertilizer will not be applied near waterbodies and what circumstances, if any, would trials in a reclamation research program use fertilizer and if so, then which type of fertilizer(s). A memo is requested that outlines these details and commitment to include the details in an updated plan is requested.	Please see "R5_LDN UFN_Comment ID 946.pdf" in response to determining when, where, and how fertilizer will not be applied near waterbodies. As part of the November 9, 2022 discussion with Keefer Ecological Services Ltd (Keefer; representing LDN and UFN), BW Gold agreed that fertilizers would not be used at the mine site except for site-specific cases. The site-specific cases would include reclamation research trials and in areas where it is critical to encourage plant growth to reduce wind or water erosion. Reclamation research programs will detail use of fertilizer application (if required) and will include mitigations to avoid fertilizer entering the natural watercourses. The memo "R5_LDN UFN_Comment ID 946.pdf" provides BW Gold's approach for site-specific application of fertilizers.		LDN/UFN	BWG					TD, Dec 19	Ready for Publishing
947	Appendix 9-A	Sediment Control Ponds	LDN/UFN		Jun 06, 2022	1	New		No	Concern that measuring the noted parameters "when discharging" is not proactive. How can exceedances be addressed as needed with this approach?	Measures to be implemented in the event of an exceedance are described in Section 9.1 (of Appendix 9-A).	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
947	Appendix 9-A	Sediment control ponds	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	See comment ID 921. Additional monitoring and stopping work are not proactive mitigation measures.	Thank you for your comment. Please see the Response to Comment 921.		LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	CB; July 29	Ready for Publishing
948	Appendix 9-A	Sediment Basins	LDN/UFN		Jun 06, 2022	1	New		No	How will sediment from basins be tested to ensure it is suitable for use as fill or in stockpiled materials (specifically, what parameters)? If stockpiled, which stockpile would it be added to?	See response to Comment #912.	RT/TD to review	LDN/UFN	Lorax		??/Timo	AT/KP	Ready for Submission	GM; June 24	Ready for Publishing
949	AQDMP 1.4 Related Documents	Monitoring	LDN/UFN		Jun 08, 2022	1	New		No	It is made clear how the results of the AQDMP will influence the CFMP, but not how the CFMP will influence the AQDMP. If the CFMP reveals concerns the AQDMP should be revised accordingly.	BW Gold will make the suggested revision and include reference to the CFMP as a potential driver for AQDMP updates. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	AT	Ready for Submission	AT, June 25	Ready for Publishing
949	AQDMP 1.4 Related Documents	Monitoring	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	RT; Aug. 2	Ready for Publishing
950	AQDMP 4. Adaptive Management Framework	Planning	LDN/UFN		Jun 08, 2022	1	New		No	Plan section should include "Identify and characterize greenhouse gas emissions sources". Air quality includes more than just fugitive dust.	The AQDMP is written to address emissions of criteria air contaminants, not GHGs. Therefore, no GHG-specific mitigations are included in this plan.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
950	AQDMP 4. Adaptive Management Framework	Planning	LDN/UFN		Jul 22, 2022	2	Follow Up	Clarification	No	Specify the "emmissions of criteria" and why the scope of management does not include GHG emissions. Request comment from MMO as to whether GHG emissions need not be addressed in management plans.	Criteria air contaminants include PM10, PM2.5, SO2, NO2 and CO. They do not include GHGs. There is no requirement to include GHGs in the AQDMP. GHGs will be reported to BC ENV and ECCC if emssions exceed the regulatory threshold of 10,000 tonnes per year. BW Gold will be tracking GHG emissions to determine if reporting is required.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
951	AQDMP 4. Adaptive Management Framework	Planning	LDN/UFN		Jun 08, 2022	1	New		No	Planning stage should also include the identification of potential impacted areas.	A bullet will be added under the subheading Plan (in Section 4.0) to include the identification of potential impact areas. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
951	AQDMP 4. Adaptive Management Framework	Planning	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
952	AQDMP 5.3.1 Open Pit	Electric drills	LDN/UFN		Jun 08, 2022	1	New		No	Will the use of diesel drills be stopped once electric drills are fully operational after Year +5?	Diesel drills will be progressively retired once they reach their optimal operating life.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing

953	AQDMP 5.3.3 Tailings Storage Facility	Clarificatio n	LDN/UFN		Jun 08, 2022	1	New		No	Please be more specific to what "fairly coarse" means.	The particle size distribution of the tailings samples is described in the previous sentence (approximately 44% fine sand, 46% silt and 10% clay). The particle size composition is considered "fairly coarse".	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
954	AQDMP 7.1 Air Quality Objectives and Parameters of Concern	Environme ntal factors	LDN/UFN		Jun 08, 2022	1	New		No	Although identifying sensitive receptors for human health is important, sensitive ecological receptors should also be noted as fugitive dust may have an indirect effect on human health. Sensitive receptors should also include areas of cultural significance to the Indigenous communities.	Ecological receptors and receptors with cultural significance to Indigenous communities will be considered for addition to Section 7.1. Locations of receptors with cultural significance will be considered when provided to BW Gold. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 28	Ready for Publishing
954	AQDMP 7.1 Air Quality Objectives and Parameters of Concern	Environme ntal factors	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan. Locations have been provided to BW Gold.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
955	AQDMP 7.1 Air Quality Objectives and Parameters of Concern	Environme ntal factors	LDN/UFN		Jun 08, 2022	1	New		No	What assessments have been done to verify that adverse ecological effects won't occur?	Chapter 6 of the MA/EMA permit application discusses the results of this EA. Further information can be found in the Project EA.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
955	AQDMP 7.1 Air Quality Objectives and Parameters of Concern	Environme ntal factors	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Section 7.1 of this MP exclusively refers to impacts on human health, with no inclusion of ecological impacts. If ecological impacts were assessed, why are they omitted from this section? Did that assessment deem that there are no air quality objectives or parameters of concern in relation to ecological impacts? Not to mention impacts to wildlife, SO2 is known to cause water stress in plants, reduce growth and yield and increase senescence, for example, so we disagree that there are no applicable Air Quality Objectives and Parameters of Concern for ecological impacts.	The ecological risk assessment, conducted as part of the EA, did not identify any criteria air contaminants as COPCs. Generally, risks to ecological receptors from criteria air contaminants are deemed negligible compared to risks from exposure to contaminants in soil, water, sediments, and food/prey. Ambient air quality objectives and the Canadian Ambient Air Quality Standards are designed for the protection of ecological and human health, and there are no Objectives or Standards specifically applicable for ecological impacts alone.		LDN/UFN	ERM	Entia	Andres		Ready for ERM Review	TD, Aug 11	Ready for Publishing
956	AQDMP 8.1 Training and Awareness	Review	LDN/UFN		Jun 08, 2022	1	New		No	Plan should be reviewed and updated at least annually.	AQDMP Section 11 discusses annual plan review.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
957	AQDMP 8.1 Training and Awareness	Training	LDN/UFN		Jun 08, 2022	1	New		No	Employees and contractor should receive annual refresher training	Thank you for noting this. BW Gold will revise the text in a future iteration of the plan to include that employees and contractors should receive annual refresher training.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
957	AQDMP 8.1 Training and Awareness	Training	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
958	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Mitigations	LDN/UFN		Jun 08, 2022	1	New		No	Open pit - Educating those involved in material planning is a good start, however standards that prohibit excess drop heights should be implemented rather than just training on the importance of minimizing. Creating standards in which employees and contractor must abide by has a higher likelihood of success	Thank you for noting this. BW Gold appreciates the comment and will consider this in development of our training programs.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
958	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Mitigations	LDN/UFN		Jul 22, 2022	2	Follow Up	Follow Up	No	As the previus comment indicated, training alone is not an adequate response. We request standards to be set, which limit drop heights.	Drop heights are determined by many factors including, current operational requirements, the composition of the material being moved, the moisture content and current and historical meteorological conditions. The training provded to operators will help them make the best judgement on drop heights based on the factors descibed above with the overall goal of always minimizing drop heights.		LDN/UFN	ERM		Andres				
959	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jun 08, 2022	1	New		No	Production drilling - please clarify the rationale for what is considered "very dry conditions (less than 0.25 mm/day over a week". Why was this chosen rather than the use of wet drilling at all times?	Wet drilling is not required at all times. Therefore, a trigger based on professional judgement was included in the AQDMP.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
960	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jun 08, 2022	1	New		No	Production blasting - What are the weather cutoffs for determining if impacts will occur?	AQDMP will be updated to: "Where dust or fume impacts on employees and environment cannot be avoided, blasting must be postponed until wind direction does not disperse emissions towards employees or local sensitive receptors. The Drill and Blast Superintendent and Mine manager will ultimately decide when to postpone blasting (the EM and Health and Safety can inform this decision)."	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
960	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
961	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jun 08, 2022	1	New		No	Concrete batch plants - Please specify what a "low" pile is	A low pile does not have a specific height, but will be based on minimizing the surface area exposed to the wind.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
961	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	A maximum height should be included for clarity for employees.	The height of the piles is dependent on conditions at site and particle size of stockpile. Refer to TARP for stockpiles and Fugitive Dust SOP.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
961	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up	comment	No	Heights are included for other items in the left column, we request clarification on the height that is considered to be 'low' for all situations of piles.	The maximum height will be approximately 10 m.		LDN/UFN	ERM		Andres		Ready for Submission	RT: Sept 13	Ready for Publishing
962	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jun 08, 2022	1	New		No	Aggregate crushing and screening areas - Please specify what a "low" pile is	A low pile does not have a specific height, but will be based on minimizing the surface area exposed to the wind.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
962	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarificatio n	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	A maximum height should be included for clarity for employees.	The height of the piles is dependent on conditions at site and particle size of stockpile. Refer to TARP for stockpiles and Fugitive Dust SOP.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing

962	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarification	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up	Comment	No	Heights are included for other items in the left column, we request clarification on the height that is considered to be 'low' for all situations of piles.	The maximum height will be approximately 10 m.		LDN/UFN	BWG				Ready for Submission	RT: Sept 13	Ready for Publishing
962	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarification	LDN/UFN (Christina Delaney)		Nov 17, 2022	4	Follow Up		No	We request your commitment to add the detail provided in the updated plan.	BW Gold commits to clarifying in the next version of the plan that the term 'low piles' in the context of the reviewer's comment are to have a maximum height of approximately 10 m. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	BWG					RT; nov 21	Ready for Publishing
963	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	TSF, Site C...etc... - What sort of considerations are being taken to ensure that the application of calcium chloride (or magnesium chloride) as a contingency will not result in more harm to the direct environment (i.e.. long-term effects to surrounding vegetation and runoff into nearby water bodies)?	When used appropriately, there are limited effects of using calcium chloride. Calcium chloride is a common substance used to control fugitive dust. BW Gold will follow guidance from the BC best practice manual on fugitive dust management, (https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/guidance-documents/dust_management_plan_guidance.pdf), which refers to the best management practice manual from the NWT: (https://www.enr.gov.nt.ca/sites/enr/files/guidelines/dustsupression.pdf). The application rate of dust suppressant will be carefully monitored to ensure adequate coverage without pooling or runoff of products. The amount of dust suppressant applied will not exceed the minimum amount required to effectively suppress dust. Dust suppressant will be bladed or incorporated into the road immediately upon application, to ensure the product does not migrate off the roadway. There will be no evidence of excess product on the roadway. The dust suppressant will not migrate or run off the traveled portion of the roadway. BW Gold will revise the plan to indicate this change. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
963	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarification	LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revised text mentioned in above response is included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
964	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	TSF and Mine Haulage and service roads - Please indicate how often visual inspections will occur.	See Table 9.1-1 for frequency.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
964	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Clarification	LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Table 9.1-1 outlines frequency of visual inspections for roads but not the TSF.	Visual inspection frequency for TSF will match the time frame for roads (2 hours). Table 9.1-1 will be updated to include this information. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
965	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Standards	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and information describing the no-idling policy is included in the updated management plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	CB; July 29	Ready for Publishing
965	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Standards	LDN/UFN		Jun 08, 2022	1	New		Yes	Vehicles - Suggest implementing a no idling policy	A no-idling policy will be implemented, except for extenuating circumstances during the winter where cold starts and stopping could wear on mining equipment. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
966	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Missing content	LDN/UFN		Jun 08, 2022	1	New		No	No air quality mitigations have be put forward regarding GHG emissions	The AQDMP is written to address emissions of criteria air contaminants, not GHGs. Therefore no GHG-specific mitigations are included in this plan.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
966	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Missing content	LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	See response from comment ID 950. Where can air quality mitigations regarding GHG emissions be found in the application?	There is no requirement to include GHGs in the AQDMP. GHGs will be reported to BC ENV and ECCC if emissions exceed the regulatory threshold of 10,000 tonnes per year. BW Gold will be tracking GHG emissions to determine if reporting is required and also for the pruposes of annual ESG reporting under various frameworks that BWG is currently undergoing a selection process for.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	TD, Aug 11	Ready for Publishing
966	AQDMP Table 8.2-1: Air Quality Mitigation Measures	Missing content	LDN/UFN		Sep 01, 2022	3	Follow Up	comment	No	Thank you for that information. How, when and how frequently will this GHG quantity be communicated to the nations? Please indicate a communication commitment to the nations for all atmospheric impacts, including GHG emissions.	GHG emissions that exceed the regulatory threshold of 10,000 tonnes per year will be reported and provided to first nations by July 1st each year. The reports will be sent via email directly to first nations.		LDN/UFN	ERM		Andres		Ready for Submission	RT; sept 15	Ready for Publishing
967	AQDMP 8.3.4 Nitrogen Dioxide and Sulfer Dioxide Monitoring	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	How will hourly NO2 and SO2 be measured for comparison against the CAAQS?	Hourly NO2 and SO2 will not be measured, because modelling results indicate that no exceedances of hourly standards are expected at sensitive receptor sites. The monitoring for NO2 and SO2 will be conducted using the radiello passive monitoring system that provides monthly average concentrations.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
968	AQDMP 8.3.5 Carbon Monoxide	Missing content	LDN/UFN		Jun 08, 2022	1	New		No	Regardless of expected CO amount, Condition 6.12 of the DS requires a CO monitoring program. Discussion around decreasing or excluding monitoring should only take place once it is proven that the project is well below objectives.	The AQDMP will be updated to include monitoring of CO. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
968	AQDMP 8.3.5 Carbon Monoxide	Missing content	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	This is a DS requirement therefore needs to be included in the management plan.	A CO monitoring plan will be included in an updated AQDMP. This will comprise monitoring for CO at the workers camp using passive monitoring.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
969	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	Unpaved roads - unsure what the different is between "none" and "low" trigger	As stated in Table 9.1-1: "None - Dust plume less than half the height of a haul truck tire. Low - Dust plume less than half the size of a haul truck for any period of time up to 30 minutes."	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 28	Ready for Publishing

970	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	Surface earthworks - please define what "minor localized dust" is	Minor localized dust indicates dust plumes that are less than 2 metres in height. BW Gold will clarify this definition in a future iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 28	Ready for Publishing
970	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and this definition is included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
971	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	Surface earthworks (low) - what if the construction consists of moving material (i.e.., how will this be minimized)? Define what minimize actually looks like (e.g., restricting movement to certain hours, areas?)	"Minimize" means to reduce earth moving activity while the "low" trigger is still in effect.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
972	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	Stockpiles - please define what "minor localized dust" is	Minor localized dust indicates dust plumes that are less than 2 metres in height. BW Gold will clarify this definition in a future iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
972	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and this definition is included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
973	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	Material handling - please define what "minor localized dust" is	Minor localized dust indicates dust plumes that are less than 2 metres in height. BW Gold will clarify this definition in a future iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
973	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and this definition is included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
974	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jun 08, 2022	1	New		No	Fine PM & SO2/NOx - Management responses don't actually propose any mitigations but rather says they will be developed. Please clarify what the "associated mitigations" are - it's understood they may differ pending on the source, but can still be generalized here	The reason specific mitigations are not mentioned is that there are too many possible outcomes of the causal analysis. Additionally, for each of the possible causes, there may be a number of possible mitigations that would be most effective. The mitigations will also be dependent on the month/season, the PM/SO2/NO2 values that were found, meteorological conditions at the time and what is practical from a mine operations perspective. Consequently, the possible number of specific mitigations becomes too high to reasonably list in the AQDMP.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 28	Ready for Publishing
974	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN		Jul 27, 2022	2	Follow up	comment	No	If the number of mitigation measures is too high to list in the AQDMP, please state where they can be found. As stated in the original comment, these can be high level mitigations depending on the season/conditions/etc.. but there should still be some kind of framework laid out for Fine PM/SO2/NOx	There are best management practices refereced in the AQDMP that build on the listed mitigations. These are the high level types of mitigations that are available for use. BW Gold has not developed a single list with all possible mitigations. The causal analysis is designed to identify non-standard mitigations that are targeted towards specific causes under specific conditions. Therefore, re-listing existing or generic types of mitigation does not further the explanation of how causal analysis is to be used.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
974	AQDMP Table 9.1-1: Trigger Action Response	Clarification	LDN/UFN (Christina Delaney)		Sep 01, 2022	3	Follow Up	comment	No	Acknowledging your response, the framework and decision making process could be described by adding some examples of mitigations that would be applied for the most common, or most likely to be anticipated sources and conditions.	The reviewers comment is ackowledged, however the most common types of mitigations are already listed in the AQDMP. The causal analysis is used to help identify conditions under which the most common mitigations were not successful and more targeted or specific mitigations can be developed.		LDN/UFN	ERM		Andres		Ready for Submission	RT; sept 15	Ready for Publishing
975	AQDMP 9.2 Follow-up program	Mitigations	LDN/UFN		Jun 08, 2022	1	New		No	Medium / High - Mitigations should be implemented BEFORE guidelines are exceeded as to not exceed them	Mitigations that are identified based on causal analysis will be implemented as guidelines are approached (not exceeded). BW Gold will clarify this in the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
975	AQDMP 9.2 Follow-up program	Mitigations	LDN/UFN		Jul 27, 2022	2	Carry Forward	comment	No	Please ensure comment is carried forward and this clarification is included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
976	AQDMP 9.2 Follow-up program	Follow-up	LDN/UFN		Jun 08, 2022	1	New		No	The follow-up program is significantly lacking in details as per the conditions in Federal DS 2.5 (i.e.., frequency, timing, levels of change over baseline, etc...). Please review 2.5 and revise the follow-up program accordingly.	Section 2.5 will be reviewed and clarification provided as required. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
976	AQDMP 9.2 Follow-up program	Follow-up	LDN/UFN		Jul 27, 2022	2	Follow up	comment	No	These details are requirements of the Federal DS - updates need to be made. Please indicate what details will be added in order to meet the requirements for Federal DS conditions.	BW Gold confirms that it has reviewed the AQDMP against the Federal DS conditions, including condition 2.5. The "details" referenced in the round 1 comment 976 regarding monitoing are in section 8.3 of the AQDMP. For clarity, BW Gold will add a reference to section 8.3 in section 9 of the AQDMP. The follow-up program assessment described in Section 9.2 will be conducted on an annual basis as part of annual reporting. The AQDMP will be updated to include this frequency.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
977	AQDMP		LDN/UFN		Jun 08, 2022	1	New		No	What organizations or networks have been sought in which all collected data can help better understand regional, provincial, or federal air quality trends (e.g. National Air Pollution Surveillance (NAPS) program?	Any relevant regional, provincial or federal air quality trends will be identified by a QP and included in the annual reporting that is described in Section 10.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing

978	AQDMP Appendix A	Condition 2e	LDN/UFN		Jun 08, 2022	1	New		No	Add section 8.3 (monitoring) to location in the plan	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
978	AQDMP Appendix A	Condition 2e	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and this revision is included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
979	AQDMP Appendix A	Condition 3d	LDN/UFN		Jun 08, 2022	1	New		No	Monitoring, with methods, timing, frequency etc... is section 8 not 9 of the plan	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
979	AQDMP Appendix A	Condition 3d	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and this revision is included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
980	AQDMP Appendix A	Condition 20a	LDN/UFN		Jun 08, 2022	1	New		No	Section 12 does not identify the means by which the mitigation measures will be implemented. Please update.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
980	AQDMP Appendix A	Condition 20a	LDN/UFN		Jul 27, 2022	2	Follow up	Comment	No	Identifying the means by which the mitigations measures will be implemented is a requirement of Condition 20a. Please detail how this will included in the next update.	Condition 20a is discussed in Section 12 (QP), Section 8.2 (mitigations), and Section 9.1 (mitigations and trigger-action-response plan).	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
981	AQDMP Appendix B	Condition 6.12	LDN/UFN		Jun 08, 2022	1	New		No	Section 9 does not state that a follow-up program will be implemented during all project phases. Rather, it directly copies the condition. Please clarify that a follow up program will be implemented. Further, section 9.1 does not states that carbon monoxide will be monitored. As per condition 6.12, this must be monitored. Finally, condition 2.10 of the DS states "the proponent shall discuss the follow-up program with Indigenous groups and determine, in consultation with Indigenous groups, opportunities for their participation in the implementation of the follow-up program". This is not included in section 9.	BW Gold will be more explicit in stating that the follow-up program will be implemented in all phases of the Project. This will be added to Section 9.2 in a future iteration of the plan. The AQDMP will be updated to include monitoring of CO. Section 9.2 will be updated to include reference to the discussion of the follow-up program with Indigenous Groups. Reference to consultation with Indigenous Groups is made in Sections 8.4 9, 10.1.3, and 11. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
981	AQDMP Appendix B	Condition 6.12	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and these updates are included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
982	AQDMP Appendix B	Condition 6.15	LDN/UFN		Jun 08, 2022	1	New		No	Section 10.1.2 does not states that "a plan to communicate results of the follow up program" will be developed prior to construction as per condition 6.12	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
982	AQDMP Appendix B	Condition 6.15	LDN/UFN		Jul 27, 2022	2	Carry Forward	Comment	No	Please ensure comment is carried forward and these updates are included in the next update of the plan.	Thank you for your comment, this change will be made. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	CB; July 29	Ready for Publishing
983	AQDMP Appendix B	General	LDN/UFN		Jun 08, 2022	1	New		No	There are several conditions highlighted in this concordance table that are a straight 'copy & paste' into the plan. This does not address the how, what, when, where etc.. of the condition, nor does it show commitment to executing the condition. These must be explained within the plan itself. For example, section 9 does not identify how various components of the conditions will be implemented. Further clarification of the conditions should be addressed.	The concordance tables in the Appendices refer to the sections of the AQDMP where those specific conditions are addressed. See comment response #981 for specific reference to Section 9.2 and the follow-up program.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
983	AQDMP Appendix B	General	LDN/UFN		Jul 27, 2022	2	Follow up	Comment	No	Comment ID981 only outlines the update to include reference to the discussion of the follow-up program with Indigenous Groups. The original comment here is asking for more detail on the how, what, when, where etc.. of the conditions regarding follow up program and adaptive management. Please detail how various components of the conditions will be implemented and how this revision will be included in the updated plan.	Based on DS condition 2.5 the follow-up program is required to have certain information. Below is a list of the sections of that require information and where it is located in the AQDMP and, if not currently in the AQDMP, how it will be addressed. 2.5.1 - the follow-up program will be overseen by a Qualified Professional including signing off on annual reporting - this will be explicitly stated. 2.5.2 - all monitoring is dicussed in Section 8.3 2.5.3 - all reporting is discussed in Section 10.1.2. The conditions related to reporting are listed here indicating all the requirements will be met. 2.5.4 - the levels of environmental change are already listed in Section 9.2 2.5.5 - all mitigation is discussed in Sections 8.2 and 9.1	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
984	AQDMP Appendix C	Condition 3.2	LDN/UFN		Jun 08, 2022	1	New		No	Section 5.3 does not provide an overview of site activities that could result in fugitive dust	This is included in Section 6 (Table 6-1), and can be added as a cross-reference in Section 5.3. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
985	AQDMP Appendix C	Condition 3.3	LDN/UFN		Jun 08, 2022	1	New		No	Figure 5.3-3 does not describe process that have the potential to emit fugitive dust	This is included in Section 6 and can be added as a cross-reference in Section 5.3. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
986	AQDMP Appendix D SOP	Table 5.1-1	LDN/UFN		Jun 08, 2022	1	New		No	Please define the size and height of a haul truck for response action implementation	The size of a haul truck for response action implementation is 13.7 m long and 6.5 m high. This information can be added in Section 5.3.1 in the next iteration of the plan.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing

987	Chapter 8 Health and Safety Occupational Health & Safety Policy	Content	LDN/UFN		Jun 08, 2022	0			No	Suggest adding a signature of the company CEO, or President to confirm the commitment being stated in the policy.	The Health and Safety Policy has been removed from Section 8.1 and will be developed prior to commencement of construction.	No	LDN/UFN	ERM		Valerie	RT	N/A	TD, Aug 11	Ready for Publishing
987	Chapter 8 Health and Safety Preliminary Hazard Assessment	Content	LDN/UFN		Jun 08, 2022	1	New		No	Flagging for future review.	The reviewer's comment is acknowledged.	No	LDN/UFN	ERM			RT	Ready for Submission	TD, 15-Jun	Ready for Publishing
987	Chapter 8 Health and Safety Preliminary Hazard Assessment	Content	LDN/UFN (Richard Hilton)		Jul 22, 2022	2			No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	CB; July 29	Ready for Publishing
988	Chapter 8 Health and Safety Section 8.1.1.	Occupational Health Risk Assessment	LDN/UFN		Jun 08, 2022	0			No	Provide the components of the assessment, including, but not limited to: • all anticipated physical, chemical, biological, and ergonomic hazards; • strategies to minimize and control those hazards in the design of project components; • drawings and detailed plans for HVAC and local exhaust ventilation; and • exposure control plans and safe work procedures. This is not complete yet, in general the proposed plan will meet requirements.. BW Gold Plan - "8.5.2 Occupational Health Risk Assessment As additional details become available and the site prepares to begin construction an OHS risk assessment will further develop the preliminary risk assessment."	The reviewer's comment is acknowledged, no changes have been made to Section 7.5.	No	LDN/UFN	ERM		Tonia/Michelle	RT	Ready for Submission	RT: June 24	Ready for Publishing
988	Chapter 8 Health and Safety Section 8.1.1.	Occupational Health Risk Assessment	LDN/UFN		Jun 08, 2022	0			No	Flagged for further review	The reviewer's comment is acknowledged.	No	LDN/UFN	ERM		Tonia/Michelle	RT	Ready for Submission	RT: June 24	Ready for Publishing
988	Chapter 8 Health and Safety Section 8.1.1.	Occupational Health Risk Assessment	LDN/UFN		Jun 08, 2022	1	New		No	Need to see the OHS for hazards and strategies to control them. Drawings and detailed plans for HVAC and local exhaust ventilation has not been included. Exposure control plans and safe work procedures have not been added- please advise if they have been and where.	The reviewers comment is acknowledged. EMLI has indicated to Artemis that there will be a number of Health and Safety requirements to be fulfilled post-permitting and 60 days prior to construction. Artemis is in the process of meeting with EMLI to identify post-permitting requirements.	RT/TD to review	LDN/UFN	ERM		Tonia/Michelle	RT	Ready for Submission	RT: June 24	Ready for Publishing
988	Chapter 8 Health and Safety Section 8.1.1.	Occupational Health Risk Assessment	LDN/UFN (Richard Hilton)		Jul 22, 2022	2			No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	CB; July 29	Ready for Publishing
989	Chapter 8 Health and Safety Section 8.1.2.	Ergonomics	LDN/UFN		Jun 08, 2022	0			No	Include ergonomic considerations for: • work environment; • workstations and machinery; • work equipment and tools; • manual materials handling; and • work processes and procedures. This is not complete yet, in general the proposed plan will meet requirements. BW Gold plan - "8.5.3 MSD Risk Assessment. BW Gold will ensure risk assessments are completed when new tasks, processes or machinery are introduced. By using systematic engineering principles BW Gold will identify and eliminate hazards during the design, installation, commissioning of the site.	-	RT/TD to review	LDN/UFN	ERM			RT	N/A		N/A
989	Chapter 8 Health and Safety Section 8.1.2.	Ergonomics	LDN/UFN		Jun 08, 2022	1	New		No	Flagged for further review	The reviewer's comment is acknowledged. EMLI has indicated to BW Gold that there will be a number of Health and Safety requirements to be fulfilled post-permitting and 60 days prior to construction. BW Gold is in the process of arranging to meet with EMLI to identify post-permitting requirements.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 14	Ready for Publishing
989	Chapter 8 Health and Safety Section 8.1.2.	Ergonomics	LDN/UFN (Richard Hilton)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tona/Michelle		Ready for Submission	CB; July 29	Ready for Publishing
990	Chapter 8 Health and Safety Section 8.1.3.	Emergency Wash Facilities	LDN/UFN		Jun 08, 2022	0			No	Request for comment from EMLI about whether or not this is acceptable.	BW Gold defers to EMLI on this comment.		LDN/UFN	ERM			RT	N/A		N/A
990	Chapter 8 Health and Safety Section 8.1.3.	Emergency Wash Facilities	LDN/UFN		Jun 08, 2022	0			No	List the planned or existing emergency wash facilities that will be available to meet the requirements of Section 2.4.1 of the Code. Identify facilities in detailed facility drawings (as required in Section 3.5). BW Gold plan "8.8.1 Emergency Wash Facilities Where persons may be exposed to corrosive or other chemicals harmful to the eyes or skin, the Mine Manager will ensure that eyewash equipment, emergency water baths or showers, or other suitable means are immediately available to effectively cleanse the affected body areas." A list of all existing and planned emergency wash facilities is required with detailed drawings.	The locations of planned emergency eyewash facilities have not yet been identified. As discussed with EMLI on November 3, 2020, the Application sets out the approach for identifying eyewash locations. Temporary and permanent eyewash locations will be identified prior to the commencement of construction and detailed in facility drawings prior to the commencement of operations, as required by section 3.5 of the Code.	No	LDN/UFN	ERM			RT	N/A		N/A
990	Chapter 8 Health and Safety Section 8.1.3.	Emergency Wash Facilities	LDN/UFN		Jun 08, 2022	1	New		No	Require input from EMLI	The reviewer's comment is acknowledged. EMLI has indicated to BW Gold that there will be a number of Health and Safety requirements to be fulfilled post-permitting and 60 days prior to construction. BW Gold is in the process of arranging to meet with EMLI to identify post-permitting requirements.		LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 14	Ready for Publishing

990	Chapter 8 Health and Safety Section 8.1.3.	Emergency Wash Facilities	LDN/UFN (Richard Hilton)		Jul 22, 2022	2	Follow Up		No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
991	Chapter 8 Health and Safety Section 8.1.4.	Hazardous Dust	LDN/UFN		Jun 08, 2022	0			No	Assess the potential for fugitive dusts or other materials to be released and accumulate in a building or enclosed space where they could cause a fire or explosion or be potentially hazardous if inhaled or ingested. This is not complete yet, in general the proposed plan will meet requirements. BW Gold plan - "8.6.14.6. Dust BW Gold will ensure that a JHAs will be developed detailing the control measures that will be put in place to mitigate any issues arising from the dust being generated.	The reviewer's comment is acknowledged.	No	LDN/UFN	ERM			RT	N/A		N/A
991	Chapter 8 Health and Safety Section 8.1.4.	Hazardous Dust	LDN/UFN		Jun 08, 2022	1	New		No	Flagged for further review	The reviewer's comment is acknowledged. No response is required.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 14	Ready for Publishing
991	Chapter 8 Health and Safety Section 8.1.4.	Hazardous Dust	LDN/UFN (Richard Hilton)		Jul 22, 2022	2	Follow Up		No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
992	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	0			No	List and map facilities with contingency plan to accommodate potential increases in the number of workers on site. Suggest adding contingency plan to accommodate potential increases in the number of workers on site.	Facilities will be expanded to accommodate increases in the number of temporary or permanent workers on site. Facilities are modular in nature to allow for expansions.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
992	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	0			No	Suggest adding a section to the plan briefly outlining any possible plan of expansion mentioned in response.	BW Gold will review and consider revisions in the revised Application.	RT/TD to review	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT: June 24	Ready for Publishing
992	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	0			No	Unknown if this comment was addressed		No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
992	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	1	New		No	Has BW Gold added a contingency plan? If so, where is it located?	BW Gold has not developed a contingency plan for the purpose of the Occupational Health and Safety Program. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT: June 24	Ready for Publishing
992	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN (Richard Hilton)		Jul 22, 2022	2	Follow Up		No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
993	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	0			No	List and map facilities with contingency plan to accommodate potential increases in the number of workers on site. Suggest adding contingency plan to accommodate potential increases in the number of workers on site.	Facilities will be expanded to accommodate increases in the number of temporary or permanent workers on site. Facilities are modular in nature to allow for expansions.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
993	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	0			No	Suggest adding a section to the plan briefly outlining any possible plan of expansion mentioned in response.	BW Gold will review and consider revisions in the revised Application.	RT/TD to review	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
993	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN		Jun 08, 2022	1	New		No	Same as ID #44. {Has BW Gold added a contingency plan? If so, where is it located?}	BW Gold has not developed a contingency plan for the purpose of the Occupational Health and Safety Program. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT: June 24	Ready for Publishing
993	Chapter 8 Health and Safety Section 8.1.5.	Lunchrooms, Mine Dry, and Sanitary Conveniences	LDN/UFN (Richard Hilton)		Jul 22, 2022	2	Follow Up		No	Unresolved until able to review updated health and safety requirements in post permitting.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
994	Waste MP	Table 1	LDN/UFN		Jun 08, 2022	0			No	the management plans developed should reflect what will occur operationally on the mine site and be as detailed as possible, including maps and drawings Please include map showing proposed site layout with waste management facilities.	Early Works construction has been deferred to later in 2022. A site layout map with the outdoor waste management facilities indicated will be provided in a future iteration of the Waste (Refuse and Emissions) Management Plan. The Context Statement including Table 1 and 2 will be deleted prior to final submission of the Application.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
994	Waste MP		LDN/UFN		Jun 08, 2022	1	New		No	With early works construction planned to start this spring (2022), Artemis should certainly have maps and drawings showing waste management facilities. Please include. Site Maps in the appendices are not sufficient and very difficult to see and read- suggest editing them to make them easier to interpret.	A site layout map with the outdoor waste management facilities indicated will be provided in the next iteration of the Waste (Refuse and Emissions) Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Mark/Valerie	RT	Ready for Submission	RT: June 24	Ready for Publishing
994	Waste MP	Table 1	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up		No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
995	Waste MP Section 2	Purpose and Objectives	LDN/UFN		Jun 08, 2022	0			No	Why is cardboard being considered for landfill?	The sentence will be revised in a future iteration of the plan to say "soiled carboard" and align with Table 8.1-4. Clean corrugated cardboard will be recycled/reused, while contaminated cardboard will be disposed of in an off-site landfill.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing

995	Waste MP Section 7.1	Recycling Policy	LDN/UFN		Jun 08, 2022	1	New		No	This response is not accurate, as "contaminated cardboard is not mentioned in the WMP. However, "Soiled cardboard" is included. Please update table 8.1-2 to reflect this wording change and resolve this comment. Additionally the response indicates that "contaminated cardboard will be disposed of in an off-site landfill.", while the WMP states "Soiled cardboard that cannot be recycling will be disposed of by means of onsite permitted incinerator or strictly controlled open burning…". Please clarify which is planned.	The Waste (Refuse and Emissions) Management Plan (WMP) wording is correct. Soiled cardboard will be incinerated or disposed of through controlled open burning. Revisions to Section 7.1 of the WMP will be completed to clarify that offsite disposal will also be an option if incineration is not an option, due to permitted volume limits. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
995	Waste MP Section 7.1	Recycling Policy	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up		No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
996	Waste MP Section 4.2	EAC and DS Conditions	LDN/UFN		Jun 08, 2022	0			No	There are no conditions in the EAC or DS relating to waste management covered by the WMP. - Are there conditions relating to waste management in other plans?	EAC Condition 13 requires waste management to be considered in the Construction Environmental Management Plan, which has been presented in CEMP Table 10-1. There are no conditions specific to the Waste Management Plan.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
996	Waste MP	EAC and DS Conditions	LDN/UFN		Jun 08, 2022	1	New		No	Resolved. However, Table 10-1 in the CEMP as stated in the response does not outline waste management. It only discusses spill management, which is only a portion of waste- Table 9.1-1 is more accurate.	The Waste (Refuse and Emissions) Management Plan will be updated in Section 4.2 to replace the reference to 10-1 with 9-1, as recommended. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
997	Waste MP Section 5	Adaptive Management Framework	LDN/UFN		Jun 08, 2022	0			No	Detail should be sufficient for contractors to implement the adaptive management plan. Adaptive management plans generally include specific goals, location, frequency, etc.. None of this information is included in the monitoring plan either.	General guidance provided in JAIR Section 9 indicates that key management plans shall demonstrate how environmental uncertainties will be dealt with and tracked. The Waste Management described in the WMP is a well-defined process in BC, and is not anticipated to be significantly influenced by environmental factors. Therefore, neither a comprehensive adaptive management strategy nor a trigger response plan are proposed for the WMP. Instead, a general approach to adaptive management is presented in Section 5 and Section 11.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
997	Waste MP Section 5	Adaptive Management Framework	LDN/UFN		Jun 08, 2022	1	New		No	Request for comment from EMLI about whether or not this is acceptable.	BW Gold acknowledges the comment. No response is required.		LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
998	Waste MP Section 5	Adaptive Management Framework	LDN/UFN		Jun 08, 2022	0			No	Who will be reiviewing the effectiveness of management measures?	The Section 5 (Adjust) bullet has been revised as follows: "The EM reviews effectiveness of management measures."	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
998	Waste MP Section 5	Adaptive Management Framework	LDN/UFN		Jun 08, 2022	1	New		No	What training will be provided and/or qualifications expected of the EM to be qualified to review the effectiveness of management measures for waste management? Since the Environmental Monitor has the description of environmental specialists, should it not be the Environmental Monitor who reviews the effectiveness of management measures? Response provided is adequate, however this response should be incorporated into the waste management plan as a commitment for the EM to have this experience.	The qualified EM will have prior experience implementing Waste Management Plans on construction and/or mining sites. The responsibility to review the effectiveness of the plan can also fall to a health and safety representative or a shop manager/steward as required. The responsible person will be expected to read and understand the requirements outlined in the Waste Management Plan and is expected to have prior experience with construction/mining waste management.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
998	Waste MP Section 5	Adaptive Management Framework	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No		BW Gold will update the Waste (Refuse and Emissions) Management Plan to include the required experience of the Environmental Manager as indicated in the Round 1 response. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
999	Waste MP Section 7.1	Recycling Policy	LDN/UFN		Jun 08, 2022	0			No	Cardborad is frequently cited as being non-recyclable when in "excess" amount and scheduled for incineration. Explain why larger cardboard recycling bins cannot be used instead.	The plan has been edited to use "contaminated cardboard", not "excess cardboard", to align with Table 8.1-4.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
999	Waste MP Section 7.1	Recycling Policy	LDN/UFN		Jun 08, 2022	1	New		No	This response is not accurate, as "contaminated cardboard is not mentioned in the WMP. However, "Soiled cardboard" is included in section 7.1. Please update table 8.1-2 to reflect this wording change and resolve this comment.	The term "soiled cardboard" will be retained throughout Section 7.1 of the Waste (Refuse and Emissions) Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
999	Waste MP Section 7.1	Recycling Policy	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
1000	Waste MP Section 7.1	Recycling Policy	LDN/UFN		Jun 08, 2022	0			No	Have any measures been sought to address food waste?	Food waste management is addressed in Section 8.1. Strategies to reduce food waste have not been developed at this time. Note that composting is not an option, because it is a wildlife attractant and contradictory to our wildlife management plan. Incineration of food waste after hauling it off site would be a best practice for remote camps.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1000	Waste MP Section 7.1	Recycling Policy	LDN/UFN		Jun 08, 2022	1	New		No	When will strategies to reduce food waste be developed? They should be included ASAP with construction planned for this spring.	Food waste strategies will be developed if current management of food waste becomes ineffective (based on the EM assessment of effectiveness of waste management strategies indicated), and will be incorporated into Section 8.1 of the Waste (Refuse and Emissions) Management Plan. Note that composting is not an option, because it is a wildlife attractant and contradictory to our wildlife management plan. Incineration of food waste after hauling it off site would be a best practice for remote camps.	RT/TD to review	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1000	Waste MP Section 8.1.2	Domestic Waste	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Please incorporate the following text into the waste management plan "Food waste strategies will be developed if current management of food waste becomes ineffective (based on the EM assessment of effectiveness of waste management strategies indicated), and will be incorporated into Section 8.1 of the Waste (Refuse and Emissions) Management Plan. "	The following text will be included in Section 8.1.2 of the Waste (Refuse and Emissions) Management Plan: "Food waste management strategies will be developed if current management of food waste (Table 8.1-2) becomes ineffective (based on the EM assessment of effectiveness of waste management strategies). Table 8.1-2 will be revised to incorporate new and/or improved strategies." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
1001	Waste MP Section 8.1.2	Table 8.1-3	LDN/UFN		Jun 08, 2022	0			No	Consider alternatives to food waste (i.e., composting)	BW Gold will consider alternatives to food waste management, such as composting at a later date.	No	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1001	Waste MP Section 8.1.2	Table 8.1-2	LDN/UFN		Jun 08, 2022	1	New		No	When will BW Gold consider this? It should be considered in the very near future and incorporated into this plan.	Alternatives to food waste management will be developed if current management of food waste becomes ineffective (based on the EM assessment of effectiveness of waste management stragies indicated), and will be incorporated into Section 8.1 of the Waste (Refuse and Emissions) Management Plan.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing

1002	Waste MP Section 8.1.2	Table 8.1-3	LDN/UFN		Jun 08, 2022	0			No	Corrugated cardboard should not be incincerated or transported to a landfill unless it is contaminated - recycling should be considered the main priority.	The cardboard management strategy in Table 8.1-4 has been revised as follows: ■ Reused as packaging for backhauled materials. ■ Recycled. ■ If contaminated, incinerated or transported to offsite landfill.	No	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1002	Waste MP Section 8.1.2	Table 8.1-2	LDN/UFN		Jun 08, 2022	1	New		No	This change has been reflected in section 7.1, but not table 8.1-2. Please update.	The following update will be made to Table 8.1-2 (row 7) of the Waste (Refuse and Emissions) Management Plan: "Cardboard: Reuse/Recycle or Incinerated/Open Burned/Off-site landfill (if soiled)." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1002	Waste MP Section 8.1.2	Table 8.1-2	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1003	Waste MP Section 9	Monitoring	LDN/UFN		Jun 08, 2022	0			No	Form associated with routine waste inspections should be included in this document. Waste tracking information should include type of waste being hauled from site. How often are these facilities inspected? "Waste audits will be undertaken periodically at generation points to ensure waste streams are properly segregated." Please include more detail including the frequency of the "routine visual inspections".	BW Gold restates that the form will be prepared prior to construction.	No	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1003	Waste MP Section 9	Monitoring	LDN/UFN		Jun 08, 2022	1	New		No	When will the form for routine waste inspections be developed? The response says prior to construction which on BW Golds timeline is this spring of 2022. Therefore, this form should be developed and included in this document as an appendix.	Routine waste inspection forms will be provided in an Appendix of the Waste (Refuse and Emissions) Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1003	Waste MP Section 9	Monitoring	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1004	Waste MP Section 11	Evaluation and Adaptive Management	LDN/UFN		Jun 08, 2022	0			No	Include who will be reviewing the Plan annually. Will external agencies (Indigenous Communities) be included in the evaluation process?	This sentence has been revised as follows: "The WMP will be reviewed annually by the EM to assess its effectiveness and evaluate waste management strategies." Revised draft and final versions of the WMP will be provided to external groups, as described in Section 12.	No	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1004	Waste MP Section 11	Evaluation and Adaptive Management	LDN/UFN		Jun 08, 2022	1	New		No	Again, what qualifications are expected or training provided to the EM to be qualified to review this plan? The response states that "revised draft and final version of the WBP will be provided to external groups as described in Section 12". Section 12 does not include this, however section 13 does.	The qualified EM will have prior experience implementing Waste Management Plans at construction and/or mining sites. Section 13 of the Waste (Refuse and Emissions) Management indicates that revised drafts and final versions of the plan will be provided to external groups.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1005	Waste MP		LDN/UFN		Jun 08, 2022	1	New		No	Request for comment from EMLI about whether or not this is acceptable.	BW Gold acknowledges the comment. No response is required.		LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1006	Waste MP		LDN/UFN		Jun 08, 2022	0			No	Missing an assessment and implementation of measures of uncertainty (according to general guidelines for management plans in Section 9 of JAIR)	General guidance provided in JAIR Section 9 indicates that key management plans shall demonstrate how environmental uncertainties will be dealt with and tracked. The Waste Management described in the WMP is a well-defined process in BC, and is not anticipated to be significantly influenced by environmental factors. Therefore, neither a comprehensive adaptive management strategy nor a trigger response plan are proposed for the WMP. Instead, a general approach to adaptive management is presented in Section 5 and Section 11.	No	LDN/UFN	ERM		Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1006	Waste MP	Purpose and Objectives / Industrial Waste	LDN/UFN		Jun 08, 2022	1	New		Yes	When does BW Gold anticipate receiving their permit for the on-site solid waste landfill? When are additions to the WBP planned for this topic? Under section 8.1.1 "…combustible materials will be incinerated if capacity allows or sent to an offsite landfill (stockpiling onsite is not permitted…). Is stockpiling onsite different from an on-site landfill? If not, this statement contradicts the statement that BW gold will be receiving a permit for an on-site landfill. Please clarify.	Date for receipt of permit is anticipated to be winter 2022-2023. Stockpiling for off-site disposal is different from an on-site landfill. The permit conditions will outline what is permitted in the on-site landfill. All other non-permitted materials will be removed from site and disposed of at a permitted facility.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1007	Waste MP	Adaptive Management Framework	LDN/UFN		Jun 08, 2022	1	New		No	Training procedures Please describe what these training procedures will involve in the WMP.	Training procedures are provided in Section 6 of the Waste (Refuse and Emissions) Management Plan.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1008	Waste MP	Training and Orientation	LDN/UFN		Jun 08, 2022	1	New		No	Site supervisors will be provided with a copy of the WMP and will receive additional training with respect to the requirements that are outlined in the form of operational SOPs.-When will Nations have access to these SOPs? How often will this training be conducted and by who?	Waste management standard operating procedures will be provided in a future iteration of the Waste (Refuse and Emissions) Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1008	Waste MP	Training and Orientation	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1009	Waste MP	Recycling Policy	LDN/UFN		Jun 08, 2022	1	New		No	How often will mixed recyclables be transferred to "larger designated bins"? Where are these bins located? They would still be a wildlife attractant so location and containment will be important here.	Frequency will vary depending on number of personnel in camp, nature of construction work being undertaken and capacities of the facilities. These factors are all expected to evolve over the construction period and into operations. The exact location of the larger designated bins has not been determined, but the placement will be located in the waste transfer area and will consider the potential of the larger designated bins becoming wildlife attractants prior to being shipped off site.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing

1010	Waste MP	Recycling Policy	LDN/UFN		Jun 08, 2022	1	New		No	Some recyclables may be backhauled off site in outgoing delivery vehicles and donated to a local charity. A designated recycling program will be established to accommodate this and will include separation of key recyclables that are part of the BC deposit/refund program. When will this "designated recycling program" be established and included in the WMP?	The designated recycling program is expected to be established in Operations. When established, it will be included in the Waste (Refuse and Emissions) Management Plan.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1010	Waste MP	Recycling Policy	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1011	Waste MP	Mine Facilities	LDN/UFN		Jun 08, 2022	1	New		No	When will specific locations for waste storage and collection areas be identified?	Specific locations for temporary waste storage and collection areas will be identified by the Construction and Departmental Managers prior to activities occurring for the various Project phases (see Section 7.1 of the Waste (Refuse and Emissions) Management Plan). The specific locations will be approved by the EM.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1012	Waste MP	Waste Transfer Areas	LDN/UFN		Jun 08, 2022	1	New		No	Waste sorting guidelines and SOPs related to waste flow... will be developed in accordance with the WMP and implemented prior to the start of construction, when will these be developed and available for review?	Waste management standard operating procedures will be provided in a future update of the Waste (Refuse and Emissions) Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1012	Waste MP	Waste Transfer Areas	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1013	Waste MP	Industrial Waste/General	LDN/UFN		Jun 08, 2022	1	New		No	...or burned through strictly controlled open burning (assuming permits are obtained and conditions favourable). When does BW Gold anticipate obtaining these permits, and please specify what is meant by conditions favourable.	BW Gold may apply for an open burning permit for disposal of woody debris that is not suitable for reclamation, if required. Favourable conditions refer to weather (wind, drought, etc...), and is consistent with provincial authorizations. We will apply as the need arises.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1014	Waste MP	Contaminated Soil	LDN/UFN		Jun 08, 2022	1	New		No	With regard to land farming contaminated soils, where will this occur? How often will it be mixed? Will monitoring occur (of what parameters) and at what frequency to determine contaminant biodegradation?	As the contaminated soils will go out with the tailings, monitoring would occur as part of ongoing tailings monitoring plans. As stated in Section 8.2 of the Waste (Refuse and Emissions) Management Plan (WMP), contaminated soils will be processed through the primary crusher and processing plant for encapsulation in tailings in the TSF. There are no current plans for land farming contaminated soils and it will be removed from Table 8.1-2 of the WMP. BW Gold may consider land farming at a future time, and will update the WMP and acquire any necessary permits prior to doing so. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1014	Waste MP	Contaminated Soil	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1015	Waste MP	Decommissioning or Remedial Activities	LDN/UFN		Jun 08, 2022	1	New		No	BC CSR standards should be described within the WMP, not just referenced. Please add what standards need to be monitored against for parameters of potential concern.	As stated in Section 9 of the Waste (Refuse and Emissions) Management Plan, the applicable standards will be based on the proposed end land and water use(s) for the Project. BW Gold envisions the End Land Use Plan to be an iterative and multi-variant process, including incorporation of reclamation research results, site knowledge and experience and continued community engagement. Prior to decommissioning or remedial activities, an applicable standard will be determined for reclamation and/or remediation targets.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 28	Ready for Publishing
1015	Waste MP	Decommissioning or Remedial Activities	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved until we are provided with the End Land Use Plan for review. These standards should still be described in the WMP once the End Land Use Plan is developed, not just referenced.	BW Gold provided the End Land Use Plan for review in July 2022. There are two End Land Use Objectives applicable to the Contaminated Site Regulation (CSR) standards that will be included in Section 9 of the Waste (Refuse and Emissions) Management Plan (WMP): Objective 2 (Self-sustaining vegetation that will progress to plant communities similar to pre disturbance ecosystems as supported by the results of the ecohydrological modelling.) and Objective 5 (Water quality and flow that support aquatic life and fish habitat downstream from the mine site and reclamation objectives). Section 9 of the WMP will also be revised to indicate the Schedule (i.e., Schedule 3.1, Schedule 3.2, Schedule 3.4) within the CSR for the applicable standards for comparison to parameters of potential concern (this will avoid comparison to out of date standards if the CSR is updated following compltion of the WMP). The Annual Reclamation Report will detail the comparison to the standards and the report will be provided to Indigenous nations (and EMLI) for review. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	TD, Aug 11	Ready for Publishing
1016	Waste MP	Monitoring	LDN/UFN		Jun 08, 2022	1	New		No	Inert solid wastes will be stored in a manner that minimizes the opportunity for windblown debris and animal attraction, please specific the manner of storage to minimize the above.	The following text will be added Waste (Refuse and Emissions) Management Plan: "inert solid wastes will be stored in bins with secured lids to avoid windblown debris and animal attraction." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1016	Waste MP	Monitoring	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1017	Waste MP	Monitoring	LDN/UFN		Jun 08, 2022	1	New		No	Who will conduct waste audits? What follow up action will occur if audits show that waste management is not sufficient?	The EM or a designate would conduct waste audits (see Section 5 for effectiveness monitoring). Any formal audits would follow the quality procedures for the Project, and OFIs and NCRs would be subject to corrective action.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1017	Waste MP	Monitoring	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Please add the following text to the WMP "Any formal audits would follow the quality procedures for the Project, and OFIs and NCRs would be subject to corrective action.", and provide some detail on what corrective actions would occur.	The following text will be added to Section 10 of the Waste (Refuse and Emissions) Management Plan: "Formal waste audits will follow quality procedures for the Project, and corrective actions will be applied if opportunities for improvement or non-conformances are reported. Corrective actions will be specific to the waste stream but could include additional training and education, or an increase in monitoring frequency" BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing

1018	Waste MP	Annual Reclamation Report	LDN/UFN		Jun 08, 2022	1	New		No	Results and monitoring activities will be reported until further monitoring and management is not required, as determined by the EM. Similar to previous comments, what experience will the EM have to make this decision? Should the environmental monitor be involved in this decision as their description includes an environmental specialist?	The qualified EM will have prior experience implementing Waste Management Plans on construction and/or mining sites. This role requires an understanding of Waste (Refuse and Emissions) Management Plan, associated Standard Operating Procedures and Waste Sorting Guidelines. This role does not need to be limited to an environmental specialist.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1019	Waste MP	Record Keeping	LDN/UFN		Jun 08, 2022	1	New		No	What electronic database/program will be used to store and compare data?	BW Gold is in the process of procuring an onsite electronic database for storage of all monitoring data.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 24	Ready for Publishing
1019	Waste MP	Record Keeping	LDN/UFN (Mikayla Davis)		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review that indicates the electronic database/program that will be used. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	CB; July 29	Ready for Publishing
1020	Waste MP	Evaluation and Adaptive Management	LDN/UFN		Jun 08, 2022	1	New		No	Monitoring that occurs on a monthly basis is sufficient if all is going well, however if there are problems with wildlife and waste management will this monitoring frequency increase?	If there are any problems with the wildlife and waste management procedures, the Adaptive Framework (Section 5.0 of the Waste (Refuse and Emissions) Management Plan) allows for adjustments to be made, which could include increased monitoring frequency, if warranted.	No	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 26	Ready for Publishing
1021	Waste MP	Evaluation and Adaptive Management	LDN/UFN		Jun 08, 2022	1	New		No	BW Gold will conduct and document management reviews of the WMP on a regular basis, how often will these reviews occur?	Reviews will be conducted initially on an annual basis. The frequency may be modified dependent on the monitoring program results, the type of waste generated on site and whether there are regulatory changes.	RT/TD to review	LDN/UFN	ERM		Valerie/Mark	RT	Ready for Submission	RT: June 26	Ready for Publishing
1022	Chapter 2 Baseline Information P 2-44	Soils Metal Analysis	LDN/UFN		Jun 11, 2022	0			No	RE: Arsenic levels - As there were elevated arsenic levels in 2 locations it would be appropriate to make a map of soil sample locations and where the elevated arsenic levels were detected. Please add.	The locations with elevated arsenic levels have been identified on Figure 2.3-11.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1022	Chapter 2 Baseline Information P 2-44	Soils Metal Analysis	LDN/UFN		Jun 11, 2022	1	New		No	No evidence of map	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. The elevated arsenic levels were observed in 2012 as part of the soil metals analysis to determine if the metal concentrations measured in soil will be suitable for achieving end land use objectives. This analysis confirms that metal concentrations measured in the soil will not adversely affect vegetation, wildlife or human health. A 2021 baseline survey was completed, and a 2022 summary of the soil metals concentrations (2011, 2012, and 2021) will be provided to include all baseline data in the Annual Reclamation Report.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 26	Ready for Publishing
1022	Chapter 2 Baseline Information P 2-44	Soils Metal Analysis	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow Up	Information Requirement	No	According to Section 2.3.5.5, one sample displayed 45mg/kg of arsenic, nearly 4x the threshold of 12mg/kg indicated in the CCME. Given that high levels of arsenic can inhibit plant growth, explain how exact this sampling location has been determined not to adversely affect vegetation? The original request was to mark this area and the area showing 14mg/kg of arsenic on baseline maps for future reclamation work. Request a memo addressing this comment.	The baseline soil samples with elevated arsenic concentrations (BW-221A and BW-20A) were located in the minesite and in areas within the footprint of the Tailings Storage Facility and the Upper Waste Stockplie. During soil salvage for reclamation material, soil samples from all parent material types will be collected for analysis to confirm that all measured elements have concentrations less than or equal to CCME parkland thresholds for soil and *Contaminated Sites Regulation* (BC CSR) soil standards (Schedule 3.1 of B.C. Reg. 375/96) for reverted wildlands (see Section 4.2.4.5 of the Chapter 4, Reclamation and Closure Plan). Baseline condition disturbance levels are low in the Project area, therefore any elevated concentrations should be interpreted as reflecting natural mineralization of surface soils rather than contamination, and will not affect suitability ratings for reclamation. In addition during the closure phase, a site investigation will be completed to identify any areas of environmental concern where concentrations of parameters are greater than standards prescribed under the BC CSR. A remediation plan will be developed for soils not meeting the prescribed standards or exceeding ranges of natural variation in soils with the Project area. It is premature at this time to develop the remediation plan - this would follow the site investigation to be completed during closure.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 14	Ready for Publishing
1022	Chapter 2 Baseline Information P 2-44	Soils Metal Analysis	LDN/UFN (Baylie Sjodin)		Sep 01, 2022	3	Follow up	Information Requirement	No	The original request for this comment was to mark elevated arsenic levels in reference to baseline conditions, which the proponent said they would do but never did. The request is to make the baseline data very clear and understandable for all parties. It is understood that levels are generally low, and the elevated samples MAY be natural mineralization, however, these areas should still be appropriately marked on maps until there is further data to support there is no longer elevated levels.	As stated in response to the Round 1 Comment #1022, a 2021 baseline survey was completed, and a 2022 summary of the soil metals concentrations (2011, 2012, and 2021) will be provided to include all baseline data in the Annual Reclamation Report. The Round 2 Comment ID#1022 requested the map for the purpose of future reclamation work. The site investigation during the closure phase will be completed and take into consideration the baseline (pre-Construction) soil concentrations.		LDN/UFN	ERM		Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
1022	Chapter 2 Baseline Information P 2-44	Soils Metal Analysis	LDN/UFN (Baylie Sjodin)		Oct 06, 2022	4	Follow up	Information Requirement	No	Comment not being closed until the 2021 and 2022 baseline surveys and maps are provided.	Raw soils and vegetation data was provided to LDN and UFN June 28, 2022. 2021 Cumulative Soil and Vegetation Baseline Report was submitted to the EMC July 28, 2022. The 2023 baseline survey report will be submitted in March 2023. There are maps included in the 2021 report of the sampling locations as well as through several presentations made during EMC meetings. The responder encourages the reviewer to check in with their team as this information has all been provided to Keefer previously.		LDN/UFN	ERM		Tonia			TD, Oct 17	Ready for Publishing
1023	Chapter 2 Appendix 2-B Section 4.1	Overview	LDN/UFN		Jun 11, 2022	0			No	Although extensive tests done by Environment and Climate Change Canada and PCIC have shown that such BCCAQv2 method outperforms many other statistical downscaling methodologies, such method also tends to exaggerate precipitation increase in some areas (Murdock et al., 2014). - This comment seems to be misleading based on one paper from 2013 that states BCCA has poor distribution.	a2500	No	LDN/UFN	KP			AT/KP	N/A		
1023	Chapter 2 Appendix 2-B Section 4.1	Overview	LDN/UFN		Jun 11, 2022	1	New		No	The original reference from your source (Murdock et al., 2014) states that "In summary, the downscaled projections indicate increased precipitation across almost all of North America, with larger relative increases at many locations when considering more extreme indices, though also with increasing spatial variability. Some locations display alarmingly large relative increases, suggesting a potential need for a modification to BCCAQ to avoid inflation." This does not definitively state that BCCAQ exaggerates, but instead suggests modifications may be required based on that one study. Without further study the exaggeration of increased precipitation should not be generalized as it is in this Chapter.	In the Hydromet Report: "Although extensive tests done by Environment and Climate Change Canada and PCIC have shown that such BCCAQv2 method outperforms many other statistical downscaling methodologies, such method also tends to exaggerate precipitation increase in some areas (Murdock et al., 2014)." The rest of the chapter did not bring up precipitation over-estimation. Instead, the modelling uncertainty was pointed out. We would accept this comment and change the wording from "tends to" to "may exaggerate..."	No	LDN/UFN	KP		Jaime	TD	Ready for Submission	KP, June 24	Ready for Publishing
1024	Chapter 2 2.3.4.5	Natural and Seismic Hazards Assessment Forest Flres	LDN/UFN		Jun 11, 2022	0			No	While numerous forest fires have occurred around the Project area since the baseline program was established in 2011, none have occurred directly within the proposed mine site (Knight Piésold 2021b). - Is there an estimate on likelihood based on relative areas?	BW Gold has not developed an estimate. BW Gold is planning to establish a wildfire prevention and response plan prior to the start of Major Works construction to address potential risks to personnel and the site.	No	LDN/UFN	BWG			AT/KP	N/A	TD, Jun 28	Ready for Publishing
1024	Chapter 2 2.3.4.5	Natural and Seismic Hazards Assessment Forest Fires	LDN/UFN		Jun 11, 2022	1	New		No	Forest fire likelihood and intensity is expected increase throughout the Province. Areas that have not seen a burn in recent years (both high and low intensity) are at a greater risk than those that have experience a wildlife or controlled fuel management. This section should account for this, and the baseline adjusted accordingly.	Forest fires are a concern for the reasons stated in section 2.3.4.5. Also, as stated in section 2.3.4.5, no fire has occurred directly within the proposed mine site. Therefore, although forest fires are a future concern, the baseline do not need to be adjusted for it.	RT/TD to review	LDN/UFN	KP			AT/KP	Ready for Submission	AT, June 24	Ready for Publishing

1025	Chapter 2 2.4.1.3	Geochemical Characterization - Waste Rock	LDN/UFN		Jun 11, 2022	0			No	These columns are currently on a biweekly sampling schedule with deionized water as the influent; however, the initial leachate results were not available at the time of reporting. - When will these be made available?	The column tests are ongoing. A report summarizing the results is anticipated to be provided in early 2022.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; june 17	Ready for Publishing
1025	Chapter 2 2.4.1.3	Geochemical Characterization - Waste Rock	LDN/UFN		Jun 11, 2022	1	New		No	Please provide once available.	This comment is acknowledged. The column test report will be provided once it is available.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 17	Ready for Publishing
1025	Chapter 2 2.4.1.3	Geochemical Characterization - Waste Rock	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow up	Information Requirement	No	Now mid 2022 and still no report, please provide estimate on when this will be available for review.	Based on a call held between EMLI, BW Gold and Lorax on Aug. 22, 2022, Lorax will continue to operate the column tests currently underway for two or three additional months until column pH achieves circumneutral water chemistry. BW Gold will now present the results of these tests in a report once all results are received, anticipated to be provided in early Q1 2023. In the Aug. 22 meeting, Lorax conveyed that the rock samples used in the ongoing columns tests were not intended to be used as 'base case' source terms, as the rock samples had an in-situ acidic pH which is not typical of mine rock from the deposit. Rather, the results of the columns tests to date likely reflect an upper case scenario that highlights elevated acidity that may be encountered in some rock types as the Project progresses and provide operational ML/ARD management information on how effective process water alkalinity may be at ameliorating in-situ waste rock acidity.		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing
1025	Chapter 2 2.4.1.3	Geochemical Characterization - Waste Rock	LDN/UFN (Baylie Sjodin)		Sep 01, 2022	3	Follow up	Information Requirement	No	Flagged as memo promised by September 19th.	Please refer to the updated response that was provided to Round 2 comment on August 25, 2022. Per that response, a report will be provided in Q1 2023.		LDN/UFN	Lorax		Georges		Ready for Submission	GM; Sept 14	Ready for Publishing
1025	Chapter 2 2.4.1.3	Geochemical Characterization - Waste Rock	LDN/UFN (Baylie Sjodin)		Oct 06, 2022	4	Follow up	Information Requirement	No	Round 2 comment was changed. Orginal response said: "A memo summarizing the interim results of the ongoing saturated column tests will be provided by September 19, 2022. This memo will be sealed by an appropriate QP. The memo will summarize the methods and results of column tests up to August 2022. The memo will also discuss the test results relative to the 2014 test results and comment on any implications for the assumptions presented in the Application regarding saturated waste rock." Flagged as memo not provided.	A memo will not be provided until the completion of the column tests. The results of these tests will be presented in a report anticipated to be provided Q1 2023, and not September 19, 2022. Per the updated Round 2 response, the column tests were discussed in a call held between EMLI, BW Gold and Lorax on Aug. 22, 2022. In that call, it was agreed that the column tests currently underway should be carried out for two or three additional months until the column pH achieves circumneutral water chemistry.		LDN/UFN	Lorax					GM; Oct 17	Ready for Publishing
1026	Chapter 2 2.6.3	Groundwater Contribution to Surface Water - Water Quality	LDN/UFN		Jun 11, 2022	0			No	Appendix 5-B indicates that Creek 705 will experience on average 10L/s increase nearest the project, going up to nearly 40L/s in May (prime spawning season for Rainbow Trout). This is an increase of 140% over baseline. Chapter 2 has indicated that various fish species are in Creek 705, and Appendix 2-O discussed the presense of spawning habitat for a number of reaches. What studies have been conducted to ensure that the increase in flow will not effect the spawning of the fish in Creek 705?	Creek 705 will receive diverted flows from Lake 16 via the diversion channel to Lake 15. The diversion results in a predicted increase in flow of approximately 43% (41% in May) immediately downstream of the outlet into Creek 705 (model node 6-705), dropping to 13% downstream at the confluence with the Lake 14 tributary (model node 4-705), and 4% at the downstream confluence with Fawnie Creek (model node 1-705). The fish habitat downstream of Lake 15 is described as being poor for Rainbow Trout spawning, with cobble substrate (Section 5.8.4.3 Application/EIS Appendix 5.1.2.6A_Fisheries Baseline). This habitat is expected to rapidly stabilize to accommodate increased flows, with any effects to fish habitat to be small (Section 5.3.9.3.2.2.3 Application/EIS). Overall, May/June spawning habitat for Rainbow Trout throughout Creek 705 is predicted to increase by approximately 2% due to the higher flows (Section 5.3.9.3.2.2.3 and Figure 5.3.9-9 Application/EIS).	No	LDN/UFN	Palmer			0	Ready for Submission	RT; june 14	Ready for Publishing
1026	Chapter 2 2.6.3	Groundwater Contribution to Surface Water - Water	LDN/UFN		Jun 11, 2022	1	New		No	Construction: Re-routing of water from sub-catchment DC-11 to Creek 705 and collection of all surface water upstream of the sediment pond downstream of the Site C Main Dam decreases the contributing catchment area in Davidson Creek and results in decreased streamflows. - How much quantity will be entering Creek 705? Will it dramatically alter flow rates?	Project related predicted changes to water quantities and flow rates are discussed in Chapter 5 Modelling, Mitigation, and Discharge and detailed in Appendix 5-B Life of Mine Water Balance Model Report.	No	LDN/UFN	Palmer			0	Ready for Submission	TD, Jun 23	Ready for Publishing
1027	Chapter 2 Figure 2.8-1	Baseline Sediment Quality Location Sampling	LDN/UFN		Jun 11, 2022	0			No	As per Section 7 Water Quality: Aquatic Sediments in the Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators, "Key locations should include sites upstream from, adjacent to, and downstream from the proposed mine." - Why are there no sampling locations upstream or adjacent to the mine area?	Baseline sediment quality has been conducted at two sites located adjacent to and upstream from the mine site (Creek 705 and Fawnie Creek Tributary), as shown in Figure 2.8-1.	No	LDN/UFN	ERM		Tonia	RT	N/A		N/A
1027	Chapter 2 Figure 2.8-1	Baseline Sediment Quality Location Sampling	LDN/UFN		Jun 11, 2022	1	New		No	Creek 705 and Matthews Creek both flow west of the deposit area and combine with westward flowing Fawnie Creek to form a second predominant surface water flow pattern in the region. These appear to be locations outside of the project in a different drainage flowing away from the project, and would not be considered upstream of the proposed mine. Please advise which of the sediment sampling locations are upstream of the proposed mine.	Creek 705 is a reference site, because it is not predicted to be impacted by the mine. Fawnie Creek tributary (FC-01) is another reference site located in an adjacent watershed that will not be impacted by the mine. These sites were selected as reference sites for monitoring locations in Davidson Creek below the mine site. An upstream reference site in Davidson Creek is not possible, because the mine site is located in the headwaters of Davidson Creek and there are no upstream locations within Davidson Creek since areas within the mine site are considered impacted and cannot be used as reference sites. In this situation, it is appropriate to include reference sites located in other non-impacted watershed, which has been done for this Project.	No	LDN/UFN	Entia	ERM	Lesley	RT	Ready for Submission	RT; June 20	Ready for Publishing

1027	Chapter 2 Figure 2.8-1	Baseline Sediment Quality Location Sampling	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow up	Information Requirement	Yes	"Although Creek 705 and Fawnie Creek receive outflow from areas outside of the mine site, they are still technically downstream AND receiving diverted flows from Lake 16 and therefore cannot be considered ""non-impacted"" by operations as they will be altered. There appears to be no sediment quality sampling locations in non-impacted, upstream locations despite the headwater tributaries that flow into the mine site. According to the 2016 BC Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators, section 7.3 Site Selection (under Water Quality: Aquatic Sediments) ""Key locations should include sites upstream from, adjacent to, and downstream from the proposed mine." Request a memo addressing this comment.	A memo is not required for the response because no changes to Chapter 2 or the Aquatic Effects Monitoring Program (AEMP) Plan are being made in response to the comment. An upstream site on Davidson Creek outside of the mine site is not possible because the mine site is situated in the headwaters for this creek. Any remaining headwater tributatries of Davidson Creek located upstream of the mine site are considered to be lost habitat due to isolation (e.g., Creek 668328) for which fish offsetting is proposed. These tributaries are generally small, often emphemeral, and would not be good references sites for sites located downstream of the mine site on Davidson Creek. For Creek 661, a new reference site on the Creek 661 mainstem (661-01) has been added in response to a Round 1 comment from ENV (see comment ID # 39). For Davdison Creek, where an upstream reference location is not possible, a reference site is in an adjacent waterway or watershed is appropriate. Creek 705 (via Lake 15) is expected to receive diverted flows from Lake 16 as a habitat offsetting component; however, predicted changes in flows for Creek 705 were small and changes to water quality were not expected. Monitoring proposed in the AEMP Plan (Appendix 7-A) over time will identify if there are unexpected changes in water quality or aquatic biota in Creek 705, relative to other reference sites (e.g., 661-01 in upper Creek 661 or FC-01 in Fawnie Creek). If no changes are identified, then this waterway is an appropriate reference location for Davidson Creek. The FC-01 reference site is on a tributary of Fawnie Creek (i.e., on a stream that flows into Fawnie Creek) and is outside of any expected influence from the mine site. Creek 705 flows into Fawnie Creek downstream of the tributary where FC-01 is located (i.e., FC-01 is located upstream of the confluence with Creek 705). There is no potential for mine influence of the Fawnie Creek tributary where FC-01 is located; this site was also a reference site recommended by BC ENV.		LDN/UFN	Entia	ERM	Lesley		Ready for Submission	RT; Aug. 7	Ready for Publishing
1027	Chapter 2 Figure 2.8-1	Baseline Sediment Quality Location Sampling	LDN/UFN (Baylie Sjodin)		Sep 01, 2022	3	Comment		Yes	This request is in reference to sediment quality, in which there appears to be no control baseline for future monitoring. A station should be established on Creek 688328 for a control (there is no text that suggests it is ephemeral) and another at WQ15. The sediment sampling at WQ12 is not an appropriate control baseline as it will receive diverted flows in the future. Please see Comment 2118 for further explanation on the need for control baseline for future monitoring.	Before-after-control-impact (BACI) analysis will be used to assess if there are Project related effects. The BACI analysis compares the incremental changes in impact and control sites between before (i.e., pre-Construction) and after Construction and Operations. If a statistically significant before-after change is observed at the impact site and not at the control or reference site then it would be reasonable to conclude the change was as a result of the Project (see also Section 4.4.2.3 in the Aquatic Effects Monitoring Program (AEMP) Plan). BACI analysis does not require that a control site be located in the same water course as an impact site and instead it is preferential to have a number of reference or control sites that are similar characteristics to the impact sites. It is also important that the frequency of sampling and method of data collection is similar at all sites in the before and after period. The AEMP Plan has proposed six control (reference sites) located throughout the study area that can support the BACI analysis of impact sites in Davidson Creek. Based on modelling and effects assessment completed for the Project, water chemistry, sediment chemistry or biota at these control sites are not expected to be influenced by the Project and the baseline data and stream characteristics indicate similarities with the impact sites (see Appendix 2-N). Control sites in streams include the following: 661-01 (new site, upper Creek 661 mainstem), CC-03 (water quality only), TC-01, 705-05, 705-10, and FC-01. In addition, the control sites in Creek 705 and Fawnie Creek tributary have two or more years of water quality, sediment quality, aquatic resources, and fish inventory/fish tissue data collected within the last 5 years (including in 2022). As indicated in the Application and in previous responses, water quality, sediment quality, and aquatic biota in Creek 705 are not predicted to be affected by diverted water. In the event that these media or biota are unexpectedly affected by the Project, there are other alternative reference sites available for Davidson Creek. Creek 688328 is not an appropriate control site location. This tributary is considered to be lost habitat under the Fisheries Act Authorization Application. This creek will also be diverted around the TSF (and may be subject to instream works) and is proximal to the mine site. Locating a site in the upper parts of this tributary, sufficiently far enough away from the mine site infrastructure for it to be considered a control site, is unlikely to be representative of the channel, water chemistry, or sediment chemistry downstream of the mine site in Davidson Creek. In addition, there are no pre-development aquatic resources data (sediment, periphyton, benthic invertebrates) for Creek 688328 and limited water quality (sampling initiated in 2020 to characterize diversion water). The BACI analysis would not be possible if Creek 668328 was used as a reference site for Davidson Creek. Water quality at WQ15 in Creek 705 has not been monitored since 2014 (monitoring was from 2012 to 2014, as indicated in Table 3.1-1 of Appendix 2-K). There are no current water quality data at this location. There is a single year of sediment sampling in 2012, which consisted of a single replicate. There are also no data for		LDN/UFN	Entia	ERM	Lesley		Ready for Submission	RT; sept 15	Ready for Publishing
1027	Chapter 2 Figure 2.8-1	Baseline Sediment Quality Location Sampling	LDN/UFN (Baylie Sjodin)		Oct 06, 2022	4	Comment		No	This comment is not questioning how a BACI design works, it is stating that there is no adequate CONTROL as per the C in BACI for it to effectively evaluate sediment impacts. It's understood that Creek 705 isn't expected to see impacts, but if it does than the only control is completely null. The suggestion was to establish a NEW control point in the upstream portion of Creek 688328 and start collecting sediment quality at WQ15 as it is upstream of the diverted flows and will not show potential effects.	As indicated in the Round 0, 1, 2, and 3 responses to Comment ID#1027, in the event that two Creek 705 control sites are impacted by the Project, there are multiple other control sites located throughout the study area that can be used as alternative control locations. Fawnie Creek tributary (FC-01), as an example, is a control (reference) site for Davidson Creek that will not be impacted by the Project because it is upstream, upwind (of the prevailing wind direction), and upgradient of the mine site. It is our opinion that there are sufficient control sites in the AEMP Plan currently and that additional control sites are not required.		LDN/UFN	Entia	ERM	Lesley		Ready for Submission	TD, Oct 17	Ready for Publishing
1027	Chapter 2 Figure 2.8-1	Baseline Sediment Quality Location Sampling	LDN/UFN (Baylie Sjodin)		Nov 17, 2022	5	Comment		No	Thank you for the response. Can the proponent please indicate the exact section (i.e., in the management plans) where sediment quality monitoring sites locations are, and the cooresponding control sites? It is understood water quality will be tested in various locations, however, this comment is specific to sediment quality. According to the existing data in Chapter 2, there are no other control sites for sediment quality.	The proposed monitoring for the receiving enviroment can be found in the Aquatic Effects Monitoring Program (AEMP) Plan, which was provided as Appendix 7-A of the Joint Application (March 2022). Proposed sampling sites are provided in Table 4.2-2 of the AEMP Plan, which shows that sediment quality sampling at control sites was included for TC-01, 705-05, 705-10, and FC-01. During the Application review, in response to comment ID#39 from BC ENV, a new control site located on Creek 661 (661-01) was added. This site is located on the mainstem of Creek 661, upstream of Project influence and includes sediment quality sampling. Chapter 2 of the Joint Application included a summary of sediment quality baseline data up until 2020. Additional baseline data collection occurred in 2021 and 2022. A 2022 Cumulative AEMP Baseline report is in preparation that will summarize available data, including sediment quality data, to provide the foundation for the AEMP. BW Gold anticipates the cumulative baseline report will be available by Q2 2023. Please refer to the memo from Round 1 memo -"R1_BC ENV_Comment ID 64 to 67, 77 to 82.pdf". This memo describes the information that will be compiled and presented in the 2022 Cumulative AEMP Baseline report. Table 1 in the memo also provides a summary of the baseline data that are available for each of the AEMP		LDN/UFN	Entia				Ready for BWG Review	TD, Nov 24	Ready for Publishing

1028	Chapter 2 2.9.1.3	Periphyton and Stream Benthic Invertebrate Communities - Characterization of Periphyton and Benthic Invertebrates Communities	LDN/UFN		Jun 11, 2022	0			No	The collection of fewer subsamples in 2011 and 2012 compared to 2017 affected taxa richness and diversity during those years due to species-area relationships. - Should subsequent sample years be required for comparison?	Sampling methodologies change over time as protocols and methods evolve. Use of data from different years using different methodologies is not unusual and can be addressed in the analysis and interpretation of those data. As per BC ENV's Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators, a minimum of one year of baseline data is required for aquatic resources. BW Gold currently has two or three years of data for each proposed sampling site for future monitoring, including two sites that were resampled for aquatic resources in 2021. Where there is uncertainty associated with older datasets collected using different methodologies, emphasis may be placed on the more recent dataset collected using contemporary methods.	No	LDN/UFN	ERM		Lesley	RT	N/A		N/A
1028	Chapter 2 2.9.1.3	Periphyton and Stream Benthic Invertebrate Communities - Characterization of Periphyton and Benthic Invertebrates Communities	LDN/UFN		Jun 11, 2022	1	New		No	Please note that the JAIR for this project has specified that "For baseline monitoring data, a minimum of 24 consecutive months must be provided. If fewer than 24 consecutive months of data are proposed, it must be demonstrated, to the satisfaction of ENV technical staff, that sufficient data are available to adequately characterize the baseline conditions and support the development of predictive models and the effects assessment." BC ENV's Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators should be used as guidance, but minimums stated within should not supersede the JAIR. Has ENV technical staff determined the sampling number have adequately gathered baseline conditions?	Note that the "24 consecutive months" does not necessarily mean monthly data collection, particularly for aquatic resources (periphyton and benthic invertebrates). Sampling frequency for periphyton and benthic communities is once per year, as per BC ENV's Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators. Aquatic sampling was completed in 2021 and additional sampling is planned for 2022. Monitoring sites for the AEMP for aquatic resources have or will have at least two years of data, with some sites having as much as four years of baseline data. BW Gold cannot speak for ENV technical staff and recommends that the reviewer discuss with ENV, as	No	LDN/UFN	ERM		Lesley	RT	Ready for Submission	RT; June 20	Ready for Publishing
1028	Chapter 2 2.9.1.3	Periphyton and Stream Benthic Invertebrate Communities - Characterization of Periphyton and Benthic Invertebrates Communities	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow up	Clarification	No	"Again wording from the BC ENV's Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators should NOT supercede wording from the JAIR. This needs to be confirmed with EMLI, request comment from EMLI.	BW Gold recommends that LDN/UFN direct their comment to BC ENV, as BW Gold cannot speak for ENV technical staff. BW Gold has not received any comments from BC ENV regarding requirements to provide 24 consecutive months of aquatic resources sampling data and believes that sufficient baseline data have been collected or will be collected prior to beginning construction. It is not feasible or reasonable to collect aquatic resources samples year round, as there are limited to no aquatic resource communities during winter months. The timing of annual sampling is also coincident with the time during which the genus (and species) of each organism can be identified, as it is not generally possible to identify species based on eggs or larval stages.		LDN/UFN	BWG	Entia	Lesley/Tonia	TD		TD, Aug 11	Ready for Publishing
1029	Chapter 2 2.9.3.5	Fish and Fish Habitat - Fish Habitat Offsetting Plan	LDN/UFN		Jun 11, 2022	0			No	Fish habitat compensation measures were designed to address known limitations to fisheries productivity in the affected watersheds. The designs were developed based on a screening analysis that applied criteria outlined in federal and provincial policies and guidelines. - Were these designed based on feedback from the local Indigenous fisheries as well?	Consultation with Indigenous nations on the fish compensation measures was conducted prior to and during the EA process, and continues to the present time.	No	LDN/UFN	Palmer		Ian MacLeod	TD	Ready for Submission	RT; june 14	Ready for Publishing
1029	Chapter 2 2.9.3.5	Fish and Fish Habitat - Fish Habitat Offsetting Plan	LDN/UFN		Jun 11, 2022	1	New		No	Understood that scientific measures were incorporated into the designs. However, this does not answer the original question. Please explain how local cultural measures were incorporated.	Consultation on the fish habitat compensation and offsetting designs included extensive meetings with First Nations, including UFN, LDN, CSFNs and their consultants during the development and refinement of the offsetting and compensation plans. BW Gold received and incorporated numerous comments and suggestions from First Nations on the design, implementation and follow-up monitoring of the offsetting measures. Integrated suggestions included: including a commitment to complete an updated vegetation survey to support improvements to the planned riparian vegetation species and planned planting densities; adjustments to the habitat assessment calculation to refine estimates of fish habitat quantity and quality; adding beaver-related and browse-related assessments to the effectiveness monitoring plan; a commitment to complete a post-restoration Habitat Evaluation Procedure; and numerous other clarifications.	No	LDN/UFN	Palmer		Ian MacLeod	TD	Ready for Submission	TD, Jun 28	Ready for Publishing

1030	Chapter 2 2.10-1	Wildlife Habitat Suitability Mapping - Valued Components and Indicator Species and Rationale for Indicator	LDN/UFN		Jun 11, 2022	0			No	Why is the rationale for indicator on carbiou so short and contains no details on the species?	The rationale for the selection of the valued components is the same as that used during the Application/EIS - "Based on Aboriginal groups input, caribou is of great interest. It is also a SARA-listed species."	No	LDN/UFN	ERM		Greg/Hannah	RT	N/A		N/A
1030	Chapter 2 2.10-1	Wildlife Habitat Suitability Mapping - Valued Components and Indicator Species and Rationale for Indicator	LDN/UFN		Jun 11, 2022	1	New		No	Would be useful to include species information as is done for all other species in this table.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Greg/Hannah	RT	Ready for Submission	CB, 17-Jun	Ready for Publishing
1031	Chapter 2 2.10.2.1	Vegetation - Field Surveys	LDN/UFN		Jun 11, 2022	0			No	For the purposes of this assessment only upland ecosystems at risk were reported. - Were there any lowland ecosystems that should be reported for risk?	No listed wetland ecosystems were identified in the mine site.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1031	Chapter 2 2.10.2.1	Vegetation - Field Surveys	LDN/UFN		Jun 11, 2022	1	New		No	It is understand that this particular assessment didn't identify listed wetland ecosystems, however it's also been noted that further baseline wetland studies are scheduled for summer 2022 to fill in baseline gaps.	This comment is acknowledged. BW Gold will be conducting wetlands work in June 2022 to gather and provide additional information on wetlands. The wetlands baseline info will be provided with the Wetlands Management Plan as required by the EAC.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1031	Chapter 2 2.10.2.1	Vegetation - Field Surveys	LDN/UFN (Baylie Sjodin)		Jul 19, 2022	2	Follow up	Information Requirement	Yes	Providing information in the Wetland Management Plan is great, however Chapter 2 is designed to describe baseline conditions of the site. Without all wetland baseline studies this Chapter is technically incomplete. Request that a memo be issued once wetland baseline data is collected outlining what needs to be included in chapter 2.	The wetland baseline data presented in Chapter 2 (Section 2.10.3.7) provides the locations and sizes of wetlands within the mine site based on Terrestrial Ecosystem Mapping completed in 2013 (see Figure 2.10-5). This was completed for the purpose of the Environmental Assessment for which the Environmental Assessment Certificate was received in June 2019 (i.e., the information was technically complete). The additional field based studies being completed in 2022 are expected to address uncertainty related to overestimation of some wetland extents for the purpose of construction activities and wetland offsetting. The 2022 data will be used to revise the wetland extents and identify if red- or blue-listed wetlands have been identified during the field based wetland mapping. Therefore as stated in the Wetland Management and Offsetting Plan, the updated wetland baseline results will be provided in Section 7 of the plan, a separate memo will not be produced to indicate what information will be included in Chapter 2. The Wetland Management and Offsetting Plan will be provided to LDN and UFN for review in accordance with the EAC condition		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing

1032	Chapter 2 2.10.3.8	Wildlife - Bats	LDN/UFN		Jun 11, 2022	0			No	All bat detections were within the mine site at fens or open water wetlands, surrounded by pine and spruce forest. Little brown myotis and northern myotis were the most abundant bat species observed at the mine site, with both species detected at three locations. Both species are federally listed as endangered by COSEWIC and SARA (Government of Canada 2020). Northern myotis is also provincially blue-listed (BC CDC 2020). - Are any of the observed wetland habitats considered sensitive ecosystems because of this?	Baseline wetland surveys undertaken to support the environmental assessment included wetland ecosystem mapping in accordance with terrestrial ecosystem mapping protocols and field studies between spring 2011 and fall 2013 to classify wetland ecosystems. No red- or blue-listed wetland ecosystem types were identified within the mine site during these surveys. A wetland survey was completed in fall 2021 to confirm the absence of red-listed or blue-listed wetlands and assess wetland type, function and extent.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1032	Chapter 2 2.10.3.8	Wildlife - Bats	LDN/UFN		Jun 11, 2022	1	New		No	It is understood that further baseline studies for wetlands are being required for 2022.	This comment is acknowledged. BW Gold will be conducting wetlands work in June 2022 to gather and provide additional information on wetlands.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1033	Chapter 2 Section 2.2	Baseline Information - Meteorology and	LDN/UFN		Jun 11, 2022	0			No	Recurrence interval analysis of extreme, short-duration events including rainfall, snowmelt, and wind speed. Extreme rainfall events are included but no indication of extreme/short-term events for snowmelt or	Wind Speed can be provided in recurrence intervals for the annual minimum and maximum hourly speeds. However, as noted in Section 2.2.2, "As wind speed data vary significantly for different locations but tend to be quite stable from year to year for one specific location, the wind speed data have not been correlated to wind data from a regional station".	No	LDN/UFN	KP			AT/KP	N/A		
1033	Chapter 2 Section 2.2	Baseline Information - Meteorology and Climate	LDN/UFN		Jun 11, 2022	0			No	Please provide windspeed reccurance intervals. Why is snowmelt data not collected considering the abundance of creeks that run through the Project area? SWE was calculated, however it did not address the likelihood or the potential impacts of an extreme/short-term snowmelt event.	BW Gold acknowledges the comment, and has provided windspeed and snow pack measurements as described above.	RT/TD to review	LDN/UFN	KP			AT/KP	N/A		
1033	Chapter 2 Section 2.2	Baseline Information - Meteorology and	LDN/UFN		Jun 11, 2022	1	New		No	The previous response from BW states that "wind speed can be provided in recurrence intervals for the annual minimum and maximum hourly speeds." A request was made to please provide the recurrence intervals. Understanding the average time between extreme, short-term wind events is useful information in fugitive dust preparedness. This is also a condition of the JAIR.	BW Gold would appreciate additional clarity from LDN/UFN about this comment, as we are not clear how it relates to the referenced part of the Application. BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1033	Chapter 2 Section 2.2	Baseline Information - Meteorology and Climate	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow up	Information Requirement	Yes	"Section 2.2 Meteorology and Climate of the JAIR, bullet point four states that ""recurrence interval analysis of extreme, short-duration events including rainfall, snowmelt, and wind speed"" is to be included. WHY is snowmelt data not being collected? SWE only calculates how much liquid water is present in the snowpack, it does NOT indicate how frequently extreme snowmelt events occur. Without a baseline for comparison how can the proponent assure that mine operations will not increase extreme snowmelt for downstream areas?" Request a memo addressing this comment. No discussion has been had with MMO on this, request comment from MMO.	It is not common practice to measure rates of short duration snowmelt or to make recurrence interval estimates of extreme, short-term snowmelt. Rather, continuous flow measurements, which include the effects of snowmelt, are collected in numerous project area streams, and estimates of recurrence interval peak flows for the project area are provided.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1033	Chapter 2 Section 2.2	Baseline Information - Meteorology and	LDN/UFN (Baylie Sjodin)		Sep 01, 2022	3	Follow up	Information Requirement	Yes	Extreme snowmelt has the potential to cause localized flooding, landslides, and dam failures expecially when it overlaps with precipitation events. It therefore does not matter how "common practice" it is to measure in this way as it has potential to cause detrimental effects to the project and downstream portions of Traditional Land. How exactly is the mine planning for these events without knowing the	Please see attachment "R3_LDN_UFN Comment ID 1033.pdf"		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, Sep 12	Ready for Publishing
1034	Chapter 2 Section 2.3.4	Baseline Information - Natural and Seismic Hazards Assessments	LDN/UFN		Jun 11, 2022	0			No	Discuss the potential impacts of natural hazards to proposed project infrastructure and refer to appropriate sections/documents containing a detailed assessment of risk and mitigation measures, where relevant. Flooding was cited as a geohazard, but no information given on the potential impacts.	Section 2.3.4.4 of Chapter 2 identifies the return period events that are used to inform engineering design for structures that must safely manage water for a range of hydrologic conditions, so as to reduce risk to the Project components due to large storm events. The design of water management structures considers the potential for flooding, and details related to the relevant flood design criteria and mitigation measures are presented for the Project infrastructure in Chapter 3. Refer to Table 1 in the attached document "EMLI Comments 1 and 4_VA22-00018 - Design Information Letter.pdf" (see comments 1 and 4), which provides the location in the application where the design reports and key supporting information can be found.	No	LDN/UFN	KP			AT/KP	N/A		
1034	Chapter 2 Section 2.3.4	Baseline Information - Natural and Seismic Hazards Assessments	LDN/UFN		Jun 11, 2022	0			No	This condition in JAIR should identify what the potential impacts are in relation to flooding. If potential impacts are discussed in another Chapter or document than reference should be provided as to where to find it.	BW acknowledges the comment and has provided the location of the flood design criteria in Chapter 3.	No	LDN/UFN	KP			AT/KP	N/A		
1034	Chapter 2 Section 2.3.4.4	Baseline Information - Natural and Seismic Hazards Assessments	LDN/UFN		Jun 11, 2022	1	New		No	Reference to where flood design criteria can be found in Chapter 3 should be referenced in Chapter 2 section 2.3.4.4.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime/Greg	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1035	Chapter 2 Section 2.7.1	Baseline Information - Surface Water Quality	LDN/UFN		Jun 11, 2022	0			No	Identify which data reflect un-impacted baseline versus conditions affected by previous development (e.g., exploration activities, historical mining activities). Missing.	There has been no historical mining on the mine site. Potential effects due to past activities, such as mineral exploration and logging, are reflected in the characterization of existing (background) conditions at the mine site. The cumulative effects assessment in Section 5.3.3.5 of the Project's Application for an Environmental Assessment Certificate/Environmental Impact Statement (New Gold 2015) considered these activities and concluded that there is unlikely to be cumulative effects from previous development. New Gold. 2015. Application for an Environmental Assessment Certificate / Environmental Impact Statement pursuant to the Environmental Assessment Act. S.B.C. 2002. c.43.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing

1035	Chapter 2 Section 2.7.1	Baseline Information - Surface Water Quality	LDN/UFN		Jun 11, 2022	0			No	It is understood that Section 5.3.3.5 of the Project's Application for an Environmental Assessment Certificate/Environmental Impact Statement (New Gold 2015) states "Since logging occurred prior to water quality monitoring at the site, any effects are already included in the baseline data collected" and "Water quality monitoring from 2011 through 2013 has not indicated any increases in TSS that could be correlated with adjacent tote trails, exploration, roads or drill pads. Therefore, there is unlikely to be any water quality cumulative effects from exploration activities that pre-date Project construction." However, the condition does not ask whether cumulative effects should be considered or not as part of the baseline, but simply asks for the identification of areas that are un-impacted vs. ones that have seen previous development. According to the Impact Statement above, the area has seen previous logging and exploration. Please note which areas are un-impacted baselines vs. baselines with previous development.	Please see attached "R2_LDN-UFN Comment 121,124, 125, 127, 128, 129,187, 227.pdf".	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1035	Chapter 2 Section 2.7.1.3	Baseline Information - Surface Water Quality	LDN/UFN		Jun 11, 2022	1	New		No	Please provide reference to where the characterization of these background conditions is noted for all sample locations.	Please refer to the memo 'Blackwater_Comment Responses 72, 74, 92(1_2)' for identification of previous development for each baseline station.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1036	Chapter 2 Section 2.7.2	Baseline Information - Groundwater Quality	LDN/UFN		Jun 11, 2022	0			No	Identify which data reflect un-impacted baseline versus conditions affected by previous development (e.g., exploration activities, historical mining activities). Missing.	There has been no historical mining on the mine site. Potential effects due to past activities, such as mineral exploration and logging, are reflected in the characterization of existing (background) conditions at the mine site. The cumulative effects assessment in Section 5.3.6.5 of the Project's Application for an Environmental Assessment Certificate/Environmental Impact Statement (New Gold 2015) considered these activities and concluded that there is unlikely to be cumulative effects from previous development. New Gold. 2015. Application for an Environmental Assessment Certificate / Environmental Impact Statement pursuant to the Environmental Assessment Act, S.B.C. 2002, c.43.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1036	Chapter 2 Section 2.7.2	Baseline Information - Groundwater Quality	LDN/UFN		Jun 11, 2022	0			No	It is understood that Section 5.3.3.5 of the Project's Application for an Environmental Assessment Certificate/Environmental Impact Statement (New Gold 2015) states "Since logging occurred prior to water quality monitoring at the site, any effects are already included in the baseline data collected" and "Water quality monitoring from 2011 through 2013 has not indicated any increases in TSS that could be correlated with adjacent tote trails, exploration, roads or drill pads. Therefore, there is unlikely to be any water quality cumulative effects from exploration activities that pre-date Project construction." However, the condition does not ask whether cumulative effects should be considered or not as part of the baseline, but simply asks for the identification of areas that are un-impacted vs. ones that have seen previous development. According to the Impact Statement above, the area has seen previous logging and exploration. Please note which areas are un-impacted baselines vs. baselines with previous development.	Please see attached "R2_LDN-UFN Comment 121,124, 125, 127, 128, 129,187, 227.pdf".	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1036	Chapter 2 Section 2.7.2	Baseline Information - Groundwater Quality	LDN/UFN		Jun 11, 2022	1	New		No	See response for comment ID 121 [Please provide reference to where the characterization of these background conditions is noted for all sample locations.]	Please refer to the memo 'Blackwater_Comment Responses 72, 74, 92(1_2)' for identification of previous development for each baseline station.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1037	Chapter 2 Section 2.9.2	Fish and Fish Habitat	LDN/UFN		Jun 11, 2022	0			No	Identify the areas, if any, where groundwater discharge is higher than normal and whether this groundwater discharge is potentially influencing fish habitat. Missing.	Stream segments estimated to be groundwater discharge zones are shown on Figure 3.8 in the Numerical Groundwater Model Report (Appendix 5-F). Stream segments highlighted with magenta color indicate segments where groundwater is predicted to discharge to streamflow based on the numerical groundwater modelling. Model results suggest that many segments along the downstream portions of streams receive groundwater discharge. Groundwater influence on the local study area (LSA) was assessed during baseline monitoring years using helicopter overflights and ground-based habitat surveys during the winter and have not been confirmed through direct groundwater measurement. The following statements in Appendix 2-O (Fish and Aquatic Resources 2011-2012 Baseline Report) are applicable to groundwater influence: - Section 5.8.1.5 "Overflights of the LSA conducted in March 2012 and March 2013 (unpublished data) showed that the lower section (Reach 1) and the upper section (Reaches 10 to 12 plus Lake 01628LNRS) of Davidson Creek were covered with ice in both winters. Tributaries to the upper and middle sections of Davidson Creek were also covered with ice. However, in 2013 the middle section (Reaches 2 to 9) of Davidson Creek showed long areas of open water. These were probably caused by groundwater inflows." - Section 5.8.2.5 "Overflights of the LSA conducted in March 2012 and March 2013 (unpublished data) showed that the lower section (Reaches 1 and 2) of Turtle Creek was covered with ice in both winters. However, in 2013 the middle and upper sections contained sections of open water, likely caused by groundwater inflows." - Section 5.8.3.4 "Overflights of the LSA conducted in March 2012 and March 2013 (unpublished data) showed that Reaches 1 and 2 of Creek 661 and some of its tributaries were open, but that Reaches 3 and 4 were covered with ice in both winters. The open areas were likely caused by groundwater inflows." - Section 5.8.4.4 "Overflights of the LSA conducted in March 2012 and March 2013 (unpublished data) showed that all reaches of Creek 705 and the two headwater lakes, Lake 01538UEUT and Lake 01428UEUT, were covered with ice, indicating less influence of groundwater inflows than in Davidson Creek, Turtle Creek, and Creek 661." See also in Appendix 2-O, Annex 5.8-3 Overwintering Habitat and Lake Winter Dissolved Oxygen Data, 2012 and Annex 5.1-1 Overwintering Habitat Data, March 2013, 2013 fish baseline. Streams segments estimated to be groundwater discharge zones are shown on Figure 3.8 in the Numerical Groundwater Model Report (Appendix 5-F). Stream segments highlighted with magenta color indicate segments where groundwater is predicted to discharge to streamflow based on the numerical groundwater modelling. Model results suggest that many segments along the downstream portions of streams receive	No	LDN/UFN	N/A			0	N/A		
1037	Chapter 2 Section 2.9.2	Fish and Fish Habitat	LDN/UFN		Jun 11, 2022	0			No	While this provide valuable insight into which areas are influenced by groundwater, it does not address the JAIR condition of identifiying areas (if any) of higher than normal groundwater discharge and whether it has an impact on fish communities.	Please see attached "R2_LDN-UFN Comment 121,124, 125, 127, 128, 129,187, 227.pdf".	No	LDN/UFN	N/A			0	N/A		

1037	Chapter 2 Section 2.9.2	Fish and Fish Habitat	LDN/UFN		Jun 11, 2022	1	New		No	Areas of higher than normal groundwater discharge have been identified, but do not discuss how that impacts fish communities. Appendix 2-O states "However, in 2013 the middle and upper sections contained sections of open water, likely caused by groundwater inflows. Overwintering habitat quality is rated as good in a ponded section of Reach 1 of Turtle Creek (Table 5.8-12). Mean water depth is minimal, but DO concentration is more than sufficient for overwintering fish populations." This says overwintering habitat is present and rate it, but there is no specific mention of how ground water discharge impacts fish communities.	Groundwater flows provide numerous benefits to fish communities, including Rainbow Trout and Kokanee, found in the Project's Local Study Area (LSA). Watersheds with large groundwater inputs (i.e.., base flow >50% of average annual daily flow) generally provide higher-quality Rainbow Trout habitat than watersheds with low groundwater inputs (Habitat Suitability Information: Rainbow Trout; Raleigh et al., 1984). Groundwater moderates water temperatures and provides the baseflow needed during summer and winter low flows to maintain the hydraulic conditions, habitat, invertebrate drift and dissolved oxygen concentrations needed by Rainbow Trout and Kokanee to maximize growth and survival. Groundwater inputs can be a key driver of supporting overwintering habitat by maintaining ice-free conditions that allow for resident Rainbow Trout juveniles and in-gravel Kokanee embryos to survive through winter. Rainbow Trout and Kokanee often prefer spawning sites in areas with sub-gravel flow (i.e.., tailouts of pools, immediately upstream of riffles or sites with groundwater upwellings). Overall, groundwater discharges throughout the LSA, which were described spatially in previous comment responses, support key life history stages of Rainbow Trout and Kokanee. The evaluation of the Project's residual effect on groundwater (Section 5.3.5.4.5 Application/EIS) found that anticipated groundwater-related effects would be minor residual effects, limited in spatial extent (i.e.., within 1 km of the TSF D Dam). Therefore, the baseline characterization and effects assessment of fish and fish habitat did not include a direct evaluation of the effect of groundwater discharge on local fish communities or fish habitat.	RT/TD to review	LDN/UFN	Palmer		Ian MacLeod	TD	Ready for Submission	TD, Jun 27	Ready for Publishing
1038	Chapter 2 Section 2.7.2	Groundwater Quality	LDN/UFN		Jun 11, 2022	0			No	Indicate those samples with turbidity values greater than 200 NTU and discuss the influence of turbidity on concentrations of POCs in any interpretative discussions. Missing.	Parameters of concern (POC) are identified in Chapter 5 (Section 5.10.3). Section 2.7.2.3 of Chapter 2 (Baseline Information) summarizes and interprets the baseline groundwater quality results. The influence of turbidity on groundwater quality is considered specifically as part of the discussion on Quality Assurance and Quality Control (QA/QC) Analysis in the 2020 Groundwater Baseline Report (Appendix 2-J). The accepted methods for groundwater quality sampling (BC MOE 2016) indicate low turbidity (i.e., less than 50 NTU) as a criterion for representative groundwater samples, and reasons for high turbidity (greater than 200 NTU) should be recorded and results can be used for interpretation. These methods were followed, and groundwater quality results with turbidity greater than 200 NTU were excluded from the groundwater quality characterization (refer to Table 3.2 of Appendix F QA/QC analysis in Appendix 2-J).	No	LDN/UFN	N/A			0	N/A		
1038	Chapter 2 Section 2.7.2	Groundwater Quality	LDN/UFN		Jun 11, 2022	0			No	Comment is not resolved. Not clear how the Proponent response addresses the comment.	BW Gold acknowledges the comment and will continue discussions through the Application review.	No	LDN/UFN	N/A			0	N/A		
1038	Chapter 2 Section 2.7.2	Groundwater Quality	LDN/UFN		Jun 11, 2022	1	New		No	Monitoring well MW12-02D exhibited high suspended loads and turbidity since installation despite repeated attempts to develop the well. Elevated turbidity was likely caused by fine-grained materials from that silty unit passing through the filter sand zone. While the integrity of monitoring well MW12-02D at the time of installation was considered acceptable, the monitoring well is considered damaged after June 2016. - Why are the earlier years of this well being used if a problem has existed from the beginning?	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1038	Chapter 2 Section 2.7.2	Groundwater Quality	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow up	Comment	No	Please respond to original comment	A response intended for a different comment appears to have been provided as the Round 1 response. The response should have read: The turbidity at MW12-02D was considered when determining results to include in the baseline groundwater dataset. Entire samples collected from MW12-02D before May 2014 were excluded from the baseline dataset and minor and trace total metals and total phosphorus parameters for samples collected prior to June 2016 were excluded from the data set due to the high turbidity values (Section 3.3.3 of Appendix E of Appendix 2-J). As shown on Figure F6.3 of Appendix 2-J, the water chemistry of samples collected from monitoring well MW12-02D started to trend toward the chemistry of the shallow monitoring well at that site (MW12-02S) in 2016. The monitoring well integrity is assumed to be compromised starting in 2016 and the well was subsequently removed from the groundwater quality baseline program (Section 3.3.2 of Appendix 2-J).		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1038	Chapter 2 Section 2.7.2	Groundwater Quality	LDN/UFN (Baylie Sjodin)		Jul 22, 2022	2	Follow up	Comment	No	Question not answered. Request comment from EMLI, no discussion had to date.	The Round 1 response provided for Round 1 comment was incorrect. No communication occurred withh MMO or will occur with MMO on this comment		LDN/UFN	BWG		Alastair/Klaus	AT/KP	Ready for BWG Review	or RT/TD to review	
1039	Chapter 2 2.2.1.2 [Chapter 2 2.2.1.2]		LDN/UFN		Jun 11, 2022	1	New		No	EC Vanderhoof station was used to develop synthetic long term daily temperature and precipitation for Blackwater High, and Blackwater Low. Vanderhoof sits around 650 masl whereas Blackwater High sits around 1470 masl. What adjustments were made to account for this large change in regional environments?	A lapse rate could be developed between the two stations; however, note that the lapse rate between the two stations does not represent the general orographic lapse rate of the area.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1039	Chapter 2 2.2.1.2 [Chapter 2 2.2.1.2]		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide documentation of work done to account for orographic effects in the synthetic climate database	As presented on Figures 2.13 and 2.14 of Appendix 2-B (the 2020 Hydrometeorology Report), the Blackwater High 2012-2020 precipitation series indicates 19.29% more precipitation at Blackwater High than at Vanderhoof over the same period in summer, and 15.74% more in winter. These relationshps were used to develop the synthetic series; that is, the Vanderhoof historic data series was multiplied by 1.1929 (summer months) and 1.1574 (winter months) to develop the synthetic estimates of precipitation at Blackwater High. These factors take into account all of the differences in the regional environments, including orographic effects. The same approach was applied for Blackwater Low, using the factors of 1.0442 (summer) and 0.9364 (winter) established between the Blackwater Low and Vanderhoof stations, as presented on Figures 2.15 and 2.16 of Appendix 2-B.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing

1040	Chapter 2 2.2.2 [Chapter 2.2.1.1, after Table 2.2-1]		LDN/UFN		Jun 11, 2022	1	New		No	Is there enough data to develop a lapse rate between Blackwater High and Blackwater Low?	A lapse rate could be developed between the two stations; however, note that the lapse rate between the two stations does not represent the general orographic lapse rate of the area.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1040	Chapter 2 2.2.2 [Chapter 2.2.1.1, after Table 2.2-1]		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide orogrpahic lapse rate between the 2 stations	In warmer months when the mean monthly temperature is above freezing (April through October), the mean temperature values for Blackwater Low and Blackwater High, as shown in Table 2.2 of Appendix 2-B (the 2020 Hydrometeorology Report), indicate lapse rates ranging from approximately -3.1°C per 1000 m increase in elevation (October) to -6.4 °C per 1000 m (July). The lapse rate cannot be accurately established in winter due to the frequent temperature inversions that occur in the colder months, which result in Blackwater High frequently, but intermittently, being warmer than Blackwater Low in winter.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1041	Chapter 2 2.2.2, first bullet after Figure 2.2-4	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	incomplete sentence	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, June 17	Ready for Publishing
1042	Chapter 2 2.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Is there an indication of percentage of precipitation reporting as snow vs rain for the precipitation data?	Yes, the estimated distribution of rainfall and snowfall is available for the site data (Appendix 2-B).	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1043	Chapter 2 2.3.3.2 Terrain Stability		LDN/UFN		Jun 11, 2022	1	New		No	Table 2.3-4 is confusing, as the preceding paragraph discusses the potential for alignment adjustments or different construction methods due to Potentially Unstable ground. Is the MAR not counted in this table? Provide more clarity.	Please review Appendix 3-X1 of the Application for more information related to terrain stability mapping for the various project components, including the Mine Access Road.	No	LDN/UFN	KP		James/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1044	Chapter 2 2.3.3.2 Terrain Stability		LDN/UFN		Jun 11, 2022	1	New		No	What implications does constructing a large scale TSF on terrain classified as "potentially unstable" have? Would this not be cause for concern for the structural integrity of the TSF and Dams?	An assessment of terrain stability and implications to the TSF is presented in Appendix 3-X1 of the Application. Once constructed, the proposed TSF and associated dams will buttress side slopes, locally mitigating the already low terrain stability risks in the TSF area.	No	LDN/UFN	KP		James/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1044	Chapter 2 2.3.3.2 Terrain Stability		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide documentation of terrain stability assessments being conducted, or plans to conduct	As described in Appendix 3-X1, terrain stability assessments will be conducted as required during construction and will adopt a risk-based approach to determine the extent of any necessary mitigation measures and should address the possibility of enhanced likelihood of erosion as well as landsliding as a result of the proposed vegetation clearance and earthworks. The types of temporary mitigation measures could include additional control of surface and subsurface water, adjustment to construction methods and activity sequencing, adjustment to cut and fill design slope angles, and temporary support/stabilization (e.g. buttressing, soil nailing, rock bolting, etc...).		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
1045	Chapter 2 2.3.4.3		LDN/UFN		Jun 11, 2022	1	New		No	The mine site receives moderate amounts of snowfall annually subjective language. What is it moderate compared to?	Thank you for this comment. BW Gold agrees that this is a subjective term used to suggest the site does not receive heavy annual snowfall (such as coast locations), nor does it fit within minimal snowfall areas, such as those in semi-arid regions of the province. Appendix 2-A provides the measured snowfall for the site and should be used for a quantitative evaluation of snowfall for the site.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1045	Chapter 2 2.3.4.3		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Comment	No	Provide supporting documentation defining "moderate snowfall" to what was provided in BW response, or provide quantitative values as described in Appendix 2-A	Please refer to the Snowfall Atlas of Canada (6th edition) published by the Natural Resources Canada: https://ccin.ca/home/sites/default/files/snow/snowfall_map.pdf The project is situated in an area that is marked with a green colour indicating an annual snowfall of 200-399 cm (~200-400 mm of SWE), which is a mid-level of snowfall typically observed in BC, less than the higher snowfall areas marked by blue and purple near the coast and higher than the lower snowfall values marked by light green in the south-central interior.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1046	Chapter 2 2.3.4.4		LDN/UFN		Jun 11, 2022	1	New		No	this section is missing a "so what", or reference to what part of the application I might be able to find that information in. The previous section on avalanche risk addresses the potential impact (or lack thereof) to the site. Even benign commentary on the lack of influence of flooding on the project would be nice to see summarized here	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing

1046	Chapter 2 2.3.4.4		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however it does not address the original question/concern. Please provide documentation of the influence of flooding on the project.	Flooding at the project will be managed through a combination of flow diversion, collection, and storage in various locations. Excess water resulting from flooding will be treated, if required, and discharge from site to manage the site water balance with the design operating range. The water management structures will progressively evolve as the mine footprint expands. The basis for the management of flooding is described in the design reports for the water management structures contained in the appendices to Chapter 3 of the Application. Information is contained within Appendix 3-J (TSF Stage 1 Detailed Design Report), Appendix 3-K (TSF Life of Mine Design Report), Appendix 3-N (Stockpiles Geotechnical and Water Management Design Report), Appendix 3-O (Water Management Structures Detailed Design Report), and Appendix 3-Y (Upper Waste Stockpile Geotechnical and Water Management Design Report). We would be pleased to provide structure-specific clarifications related to flood management if you have any further questions resulting from review of these reports.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
1047	Chapter 2 2.3.4.5		LDN/UFN		Jun 11, 2022	1	New		No	similar comment as above. The level of risk due to forest fires has not be quantified	Refer to response to comment 1024.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 17	Ready for Publishing
1048	Chapter 2 2.3.5.4		LDN/UFN		Jun 11, 2022	1	New		No	8 soil samples for a site this size does not seem like adequate characterization. What was the logic for this number of samples?	The soil chemistry analysis was completed at eight locations within the mine site. A total of 18 soil samples were collected between 2011 and 2012 to establish baseline concentrations of trace elements in cover materials, to monitor potential effects of windblown dust transported from mine-related sources and to determine whether concentrations of metals have changed in the soil because of Project activities. As identified in Appendix 4-H of the Application, the sampling conducted between 2011 and 2012 was limited. Thus, a 2021 soils monitoring program was conducted to supplement and expand the scope of available baseline data.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 26	Ready for Publishing
1048	Chapter 2 2.3.5.4		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide updated soil baseline from the 2021 soil monitoring program	The 2021 soils and vegetation baseline report was provided to Indigenous groups for review on July 28, 2022.		LDN/UFN	ERM		Tonia		Ready for Submission	TD; Aug 11	Ready for Publishing
1049	Chapter 2 2.6.1.1		LDN/UFN		Jun 11, 2022	1	New		No	Unclear why only 12 of the 22 hydrology stations are active. Are the others damaged, in disuse, or other? Propose to clarify further up in the section rather than below Table 2.6-2 where the explanation appears to be	Several of the hydrology stations were decommissioned to reflect changing project data needs, or moved due to challenging measurement conditions.	RT/TD to review	LDN/UFN	KP		Michael	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1050	Chapter 2 2.6.1.3		LDN/UFN		Jun 11, 2022	1	New		No	The Dean River Hydrologic system was used to estimate the long term flow patterns of the project area to establish a long term record . A regression analysis was completed to reflect the differences between the sites (70 km and 550m elev. approx.) Did the results of the regressional analysis show that the datasets were correlated?	The long-term synthesis was developed by matching ranked regression (matching flow of equal probability). The correlation between discharges does not apply in this analysis. However, ranked regression generally provides better flow estimates than equivalent frequency analysis (see Butt, C., 2013. Evaluation of the Performance of Frequency and Chronological Pairing Techniques in Synthesizing Long-Term Streamflow. Master's Thesis, Department of Civil Engineering, Faculty of Applied Science, University of British Columbia, Vancouver, BC, Canada). Furthermore, both the frequency pairing model and the watershed model produced similar flows, as demonstrated in the response to comment #149.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	At, June 23	Ready for Publishing
1051	Chapter 2 2.6.1.3		LDN/UFN		Jun 11, 2022	1	New		No	The Dean River Hydrologic system was used to estimate the long term flow patterns of the project area to establish a long term record . A regression analysis was completed to reflect the differences between the sites (70 km and 550m elev. approx.) Was there statistical significance between the datasets?	See response to comment 1050.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
1052	Chapter 2 2.6.1.3		LDN/UFN		Jun 11, 2022	1	New		No	The Dean River Hydrologic system was used to estimate the long term flow patterns of the project area to establish a long term record . A regression analysis was completed to reflect the differences between the sites (70 km and 550m elev. approx.) The regression analysis was completed using only 6 years of data (2011-2016). Is this a long enough time period to determine statistical significance or correlation?	Correlations of continuous daily flow records are often done for mining and hydro developments in BC with as little as one year of data. Generally speaking, correlations improve with longer datasets. Butt (2013) demonstrated that streamflow correlations improve with each additional year of record, (up to approximately 5 years of record), after which improvements with each additional year of record is very minor. Accordingly, with 6 years of record, our dataset is beyond the 5 year threshold, and therefore we believe we have a strong basis for the analysis. (See Butt, C., 2013. Evaluation of the Performance of Frequency and Chronological Pairing Techniques in Synthesizing Long-Term Streamflow. Master's Thesis, Department of Civil Engineering, Faculty of Applied Science, University of British Columbia, Vancouver, BC, Canada).	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
1053	Chapter 2 2.6.1.4		LDN/UFN		Jun 11, 2022	1	New		No	Given the move to Shared Socioeconomic Pathways (SSPs) for climate change prediction, is there an opportunity to update climate change projections?	RCPs and the new SSPs are designed to be complementary. While the RCPs describe different levels of greenhouse gases and other radiative forcings that might occur in the future, SSPs look at five different ways in which the world might evolve in the absence of climate policy and how different levels of climate change mitigation could be achieved when the mitigation targets of RCPs are combined with the SSPs (https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/). Therefore, RCPs are still important in discussing future climate projections for the joint application, and there is little benefit to update the baseline studies to include future socio-economic scenarios.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, June 23	Ready for Publishing
1053	Chapter 2 2.6.1.4		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, the original question/concern has not been adequately addressed. Please provide documentation showing how RCPs compare to new SSPs to provide confidence that climate change projections are not out of date.	Please see Figure 2c in the referenced document from the Pacific Climate Impacts Consortium (PCIC) (link below), which indicates that there is virtually no difference between SSP and RCP for 3 of the scenarios in terms of total anthropogenic forcing. There is virtually no difference for the project selected RCP 4.5 scenario		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1053	Chapter 2 2.6.1.4		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		No	We appreciate this response; however, given that climate change is a key aspect of mine closure, and will continue to be so in the future, the response provided is considered to be inadequate, and does not offer a simpler documentation to support Informed Consent (as part of FPIC). Please include this response within the site's water management plan, together with figures/data/etc., to support this position and allow for continuous evaluation of BW Gold's position on this question/concern as part of regular updating of the water management plan.	BW Gold acknowledges the comment. The climate change assessment for the Blackwater Project is located in Appendix 2-B (2020 Hydrometeorology Report). When the next iteration of the Hydrometeorology Report is developed for the Project, the climate change assessment section will aslo be updated to include discussion about SSPs and RCPs. Hydrometeorological characterization should be updated every three to five years to incorporate additional site-specific data, long-term monitoring data from regional stations, and refinements to state-of-practice analysis techniques. These updated assesssments can then be used for a variety of updates, such as updates to water balance modelling and the five-year update of the Reclamation and Closure Plan.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Sep 16	Ready for Publishing
1054	Chapter 2 2.6.1.4		LDN/UFN		Jun 11, 2022	1	New		No	re: Regional climate patterns, given the lack of statistical significance compared to the selected RCP scenarios, was statistical significance evaluated for the other climate scenarios to determine if they aligned more closely with the historical climate record?	No work has been done to evaluate whether RCP scenarios are statistically different from historical conditions.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, June 23	Ready for Publishing
1054	Chapter 2 2.6.1.4		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide supporting documentation outlining selection criteria for this RCP scenario, and statistical analysis against historical conditions.	Figures 4.1 and 4.2 in Appendix 2-B (the 2020 Hydrometeorology Report), which present temperature and precipitation trends in the longest regional representative datasets, indicate temperatures increasing in the last 60 years at rates ranging from approximately 0.06 to 0.6 °C/decade, and annual precipitation decreasing at a rate of approximately 8 cm per decade. The temperature and precipitation values in Table 4.1 of Appendix 2-B indicate that the regional trends have patterns more similar to RCP 4.5 than to RCP 8.5, though none of the RCP simulations indicate decreasing precipitation.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT; Aug 8	Ready for Publishing

1055	Chapter 2 2.6.1.4		LDN/UFN		Jun 11, 2022	1	New		No	re: Regional climate patterns, is there a basis for which climate change scenario is most representative based on other projects in the region? That is, other sites influenced by PDO?	It would be impossible to determine the "most representative climate change scenarios". The entire province of BC is influenced by climate cycles (and PDO is only a measure of the climate cycles; it is not a physical phenomenon).	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
1055	Chapter 2 2.6.1.4		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment; however, the response does not address the original comment / questions; namely, is there a basis for which climate change scenario is most representative based on other projects in the region.	The climate analysis for each project is considered separately. The approach presented, however, has previously been successfully employed by KP in assessing potential climate change effects for proposed mining projects in BC.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1056	Chapter 2 2.6.1.4		LDN/UFN		Jun 11, 2022	1	New		No	What is the influence of elevated temperature and rainfall with decreased snowfall and total precipitation on sensitive species such as whitebark pine?	Whitebark pine are highly tolerant of harsh abiotic conditions and advances in guidelines for planting whitebark pine have improved survival rates (McCaughey, W. W., Scott, G. L., and K.L. Izlar. 2009. Whitebark pine planting guidelines. Western Journal of Applied Forestry 24:163-166.). Thus, BW Gold has considered the influence of climate change in the Whitebark Pine Management Plan. Reclamation efforts will look to reduce the effects of climate change on whitebark pine habitats. Reclamation planting trials completed by BW Gold will increase understanding of the survival rates and planting conditions suitable for whitebark pine establishment and will inform site preparation.	RT/TD to review	LDN/UFN	ERM			RT	Ready for Submission	RT: June 26	Ready for Publishing
1057	Chapter 2 Figure 2.6-9		LDN/UFN		Jun 11, 2022	1	New		No	The influence of the PDO on the MAUD is not obvious from the figure. There is mention of a lag, which is also unclear. Perhaps if the lag was defined, it would be easier to draw the same conclusions as the author.	The text in the report describes the observed correlation between the phase of the PDO and relatively low or high runoff in the Dean River.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, June 24	Ready for Publishing
1057	Chapter 2 Figure 2.6-9		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, it does not answer the original question/concern. Please provide supporting documentation to define lag and its implications in the interpretation of the PDO and MAUD in figure 2.6-9.	The 5-year average is simply used to reduce short term fluctuations of both the annual PDO and MAUD values. This figure is simply intended to show the general correlation between the warm phase of the PDO and reduced streamflows, as well as the cold phase of the PDO and increased streamflows.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT; Aug 8	Ready for Publishing
1058	Appendix 2-H 2.2.1.3 pg.. 22		LDN/UFN		Jun 11, 2022	1	New		No	Detection limits of methods used for mineralogical investigations/studies? Text indicates that there were no acid-insoluble sulfate minerals detected. But the acidity was calculated using both total sulfur (designated MPA) and sulfide-S (designated as AP) so the sulfate-S content must be significant enough to calculate both AP-sulfide-S and 'MPA'	The correlation between total sulphur and sulphide sulphur for the waste rock samples was strong (r2 = 0.99), indicating that sulphur primarily occurs as sulphide. AP calculated from sulphide S and total S are similar, and are presented for comparison.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1059	Appendix 2-H 2.2.1.3 pg.. 23		LDN/UFN		Jun 11, 2022	1	New		No	Acid generation results from the oxidation of sulphide minerals - can also get acidity produced from soluble acid sulfate minerals.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1059	Appendix 2-H 2.2.1.3 pg.. 23		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The response does not address the original question / comment. Please provide documentation (i.e. the memorandum referenced) to allow for this comment to be closed	We are unsure what documentation is being requested and are seeking further clarification. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing
1060	Appendix 2-H 2.2.1.3 pg.. 22		LDN/UFN		Jun 11, 2022	1	New		No	Other sulfate minerals (i.e.. alunite) may be acid-insoluble resulting in an underestimated measured sulfate-S content and therefore an overestimate of calculated sulfide-S (throughout document).	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1060	Appendix 2-H 2.2.1.3 pg.. 22		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The response does not address the original question / comment. Please provide documentation (i.e. the memorandum referenced) to allow for this comment to be closed	We are unsure what documentation is being requested and are seeking further clarification. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing
1060	Appendix 2-H 2.2.1.3 pg.. 22		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up	comment	No	Please consider other sulfate minerals which may be acid-insoluble and how this impacts underestimated measured sulfate-S / overestimated calculated sulfide-S. This should be considered when updating the ML/ARD management plan in Ch.9	This comment is acknowledged and updates to the next version of the ML/ARD Management Plan will be made as necessary.		LDN/UFN	Lorax		Georges		16-Sep-22	GM; Sept 19	Ready for Publishing
1061	Appendix 2-H Table 3-14		LDN/UFN		Jun 11, 2022	1	New		No	How can material be classified as PAG1 when total sulfur content is so low i.e... minimum value reported as 0.01 %	BW Gold would appreciate additional clarity from LDN/UFN about this comment, as we are not clear how it related to the referenced part of the Application. BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1061	Appendix 2-H Table 3-14		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide supporting documentation detailing classification scheme and material balance studies showing the amount of rock being classified as PAG will not influence availability of "space" to contain the PAG through operations and closure.	The classification scheme presented in the Application has been incorporated into work in support of the Project since prior to the submission of the EA, including the block model and the mine plan. Further details on the classification scheme are included in Chapter 2 of the Application (e.g., Table 2.4-4) and in the ML/ARD Management Plan (Appendix 9-D of the Application). An annual summary of the mine waste production schedule during operations, including overburden and NAG waste rock and PAG waste rock, is provided in Table 3.3-1 of Chapter 3 of the Application. All Potentially Acid Generating (PAG) waste rock is destined for the TSF for disposal. TSF staging (i.e. the rate of rise) is an iterative process, which takes into consideration the waste storage requirements, embankment design concepts, estimated dam construction material requirements for each dam stage, and the availability of dam construction materials in the mine plan. The embankment raising schedule will be reviewed regularly during facility operation to refine plans based on the actual rate of TSF filling, availability of construction materials, and in consideration of any future adjustments to the mine plan or waste materials release (i.e. more or less PAG requiring storage). Additional details related to the TSF design and staging over the life of the mine are included in Appendix 3-K of the Application - please see sections 5.2, 6.2, and Appendix E2 for TSF storage capacity and filling information.		LDN/UFN	Lorax	KP				GM; Aug 11	Ready for Publishing

1061	Appendix 2-H Table 3-14		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		No	Thank you for your answer - at the trilateral meeting on August 18 2022, BW Gold made the following comment: "we will be drilling, not 100%, but we will be drilling a good portion of our waste zones with our dedicated grade control drilling program and doing ABA samples to get a better handle on that definition" in regards to delineating PAG and NAG on an operational basis. being "dedicated to grade control drilling" to delineate NAG and PAG on an operational basis. We would like to see this commitment included and detailed in the updated ML/ARD plan (ch.9).	This comment is acknowledged and updates to the next version of the ML/ARD Management Plan will be made as necessary.		LDN/UFN	Lorax	KP	Georges/Alastair		Ready for Submission	GM; Sept 16	Ready for Publishing
1062	Appendix 2-H Table 3-15		LDN/UFN		Jun 11, 2022	1	New		No	How can material be classified as PAG2 when total sulfur content is so low i.e... minimum value reported as 0.02 %	BW Gold would appreciate additional clarity from LDN/UFN about this comment, as we are not clear how it related to the referenced part of the Application. BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1062	Appendix 2-H Table 3-15		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide supporting documentation detailing classification scheme and material balance studies showing the amount of rock being classified as PAG will not influence availability of "space" to contain the PAG through operations and closure.	Please see response to follow-up comment 1061.		LDN/UFN	Lorax	KP		GM		GM; Aug 11	Ready for Publishing
1063	Appendix 2-H 3.2.5 pg. 78		LDN/UFN		Jun 11, 2022	1	New		No	How were samples selected for NAG pH test (587 samples) from the total of 890 waste samples that were collected for ABA?	These samples were selected as part of the geochemical characterization program described in AMEC (2014). No additional detail can be provided regarding sample selection beyond what is described in this report. However, it should be noted that NAG test selection produced a representative distribution of NAG5, NAG4, NAG3, PAG1 and PAG2 rock classes.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1064	Appendix 2-H 3.2.5 pg. 78		LDN/UFN		Jun 11, 2022	1	New		No	Regarding suggestion that NAG pH data suggesting that NPR could be reduced to 1.7 - could a sulfur cut-off be employed so that samples with low total sulfur (~<0.1 %) are classified as NPAG instead. That way there would be no samples classified as PAG 1 or 2 with low sulfur (i.e... Tables 3-14 and 3-15) or is elevated zinc an issue for these samples?	No acid-insoluble sulphate minerals have been identified in the mineralogical analyses conducted on waste rock. As such, the sulphate S content is not considered to be underestimated and the sulphide S content is not considered to be overestimated.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1065	Appendix 2-H Figure 3-30 pg.. 79		LDN/UFN		Jun 11, 2022	1	New		No	The figure would suggest that using an NPR lower than 2 would result in some PAG material (NAG pH < 4.5) be classified as NPAG.	Using an NPR lower than 2 to classify PAG is not proposed.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1066	Appendix 2-H 3.2.7 pg.. 82		LDN/UFN		Jun 11, 2022	1	New		No	Can or has the estimated acidity lag time from the kinetic NAG tests (2-5 years) be confirmed from kinetic leach column tests	Lag time estimates from humidity cell tests indicate that most PAG rock units will generate ARD relatively quickly upon exposure to oxidizing conditions. All three PAG1 HCT samples became acid generating within 10 weeks, and most PAG 2 waste rock HCTs (three of six) became acid generating within 30 weeks. Acid generating reactions would proceed at a slower rate under field conditions. However, the rapid onset of ARD in the laboratory tests shows that ARD generation will be a risk even with relatively short exposure duration (weeks to months). Further details are provided in the Lag Time Estimates section of Chapter 2.4 (page 2-66 to 2-67 of the Application).	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1066	Appendix 2-H 3.2.7 pg.. 82		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Question	No	Thank you for your response; however, the respond speaks to PAG rock units. The question / comment is asking about NAG rock units.	The section referenced in the original comment (Section 3.27 of Appendix 2-H) presents kinetic net acid generating (NAG) tests performed on PAG rock samples. This test work was not completed on NAG rock units.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1067	Appendix 2-H Table 3-1 pg.. 44		LDN/UFN		Jun 11, 2022	1	New		No	Why were these two overburden samples selected for XRD? Noted no sulfide minerals detected but XRD results not related back to ABA data. Why weren't the higher sulfur interface samples selected to determine the mineralogy of the sulfur content?	These samples were selected as part of baseline geochemical characterization studies completed in 2013 and submitted with the EAC application. No additional rational can be provided for sample selection, beyond what is described in AMEC, 2014.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1067	Appendix 2-H Table 3-1 pg.. 44		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Comment	No	Suggest that further work be completed on overburden samples especially those near the interface to determine sulfur speciation and mineralogy, to understand risk of this material type	No further analysis of overburden samples prior to mine development is proposed. However, the ML/ARD Management Plan commits to ongoing operational monitoring of overburden as the Project progresses.		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing
1068	Appendix 2-H Figure 3-1 pg.. 33		LDN/UFN		Jun 11, 2022	1	New		No	Are you able to re-plot this figure to get rid of negative sample depths - or is there significance to negative depths? No data plots in this quandrant. Also state significance of green line on the graph in figure caption or in figure legend (assume its x10 crustal abundance from text?)	Yes, the green line shown represents ten times the average crustal abundance. This report was prepared for the EAC application and will not be reissued with updates.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1069	Appendix 2-H Figure 3-2 pg.. 34		LDN/UFN		Jun 11, 2022	1	New		No	state significance of green line on the graph in figure caption or in figure legend (assume its x10 crustal abundance from text?)	Yes, the green line shown represents ten times the average crustal abundance. This report was prepared for the EAC application and will not be reissued with updates.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1070	Appendix 2-H 3.1.4 pg.. 38		LDN/UFN		Jun 11, 2022	1	New		No	How were these samples selected for NAG pH test from the total overburden ABA population? ABA had indicated a couple of PAG or UC samples, however NAG pH indicated all were NPAG. Why wasn't NAG pH performed on samples with NPR < 2 (4 samples in Figure 3-3) to confirm PAG classification?	These samples were selected as part of baseline geochemical characterization studies completed in 2013 and submitted with the EAC application. No additional rational can be provided for sample selection, beyond what is described in AMEC, 2014.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1071	Appendix 2-H 3.1.4 pg.. 38		LDN/UFN		Jun 11, 2022	1	New		No	Why wasn't NAG pH performed on samples with NPR < 2 (4 samples in Figure 3-3) to confirm PAG classification?	These samples were selected as part of baseline geochemical characterization studies completed in 2013 and submitted with the EAC application. No additional rational can be provided for sample selection, beyond what is described in AMEC, 2014.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1072	Appendix 2-H 3.1.5 pg. 39		LDN/UFN		Jun 11, 2022	1	New		No	How were samples selected for shake flask - were a range of sulfur contents and/or depths of sample tested?	For the 2021 overburden SFE tests, samples were selected to represent a range of total S (between minimum and 90th percentile values) and a range of depths. The remaining samples were selected as part of baseline geochemical characterization studies completed in 2013 and submitted with the EAC application. No additional rational can be provided for sample selection, beyond what is described in AMEC, 2014.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1073	Appendix 2-H 3.1.5 pg.. 39		LDN/UFN		Jun 11, 2022	1	New		No	How does metal mobilisation relate back to sulfur content and proximity to the basement interface?	In general, metal concentrations in overburden samples were greater in samples near the overburden-bedrock interface. Humidity cell tests completed on Project waste rock show that metal leaching potential is related to metal content. A similar relationship can be expected in overburden, with metal leaching risks likely limited to samples with elevated trace metal concentrations (e.g., Zn > 1,000 ppm).	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing

1074	Appendix 2-H 3.1.6 pg.. 44		LDN/UFN		Jun 11, 2022	1	New		No	Concluding remarks indicate that some material near the bedrock-overburden interface may have potential for acid generation (PAG?), do we know quantities of material and if this is captured in the waste block model?	Currently all overburden (83Mt) is considered glacial tills and have not been broken out in subcategories at this time. Weathered bedrock is incorporated into the bedrock material balance and has been categorized based on the MLARD model generated. A total of approximately 66Mt of weathered (or oxidized) bedrock will be mined and is identified as follows: - Ore: approximately 15Mt will be processed and is accounted for in the material balance. - Waste: approximately 51Mt, including 17Mt PAG 1 & 2, 15Mt NAG3 and 19Mt NAG 4&5 material. This material is accounted for in the material balance reporting to the TSF. All overburden is considered NAG. Testwork undertaken by AMEC (2014) indicated 94% of the samples, considered as overburden, were categorized as NAG, while the remaining 6% were classified as PAG. Given that the samples were collected near the overburden/bedrock interface, there is potential for the weathered bedrock to have been misclassified as overburden. To ensure the correct definition of overburden material, testing of the overburden material based on the ML/ARD Management Plan will be undertaken prior to overburden removal, utilizing grade control drilling near the contact. This will allow BW Gold to properly manage the overburden material, prior to deposition, based on its geochemical characterization. Overburden will be categorized based on the ARD/ML characteristics of the material in accordance with the management plan. Assuming 6% of the samples were correctly identified as PAG overburden, then approximately 4.9Mt will be deposited in the TSF, which has capacity to capture the additional material. Based on the amounts of additional overburden identified, the construction schedule could be accelerated, and the schedule may be revised during operations.	RT/TD to review	LDN/UFN	MMTS	KP		GM		GM; June 28	Ready for Publishing
1075	Appendix 2-H Table 3-29 pg.. 87		LDN/UFN		Jun 11, 2022	1	New		No	Humidity cell BW-ARD-499 is listed as PAG but has a total sulfur content of 0.07% and is in oxide facies, while BW-ARD-610 is in sulfide facies and has higher sulfur (0.1%) but is NAG?	This statement is correct. The samples were classified based on NPR. BW-ARD-499 has an NPR of 1.4 and BW-ARD-610 has an NPR of 2.1.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1076	Chapter 2 2.6.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Given the downward hydraulic gradient in Davidson Creek, is there any concern about surface impacts reaching groundwater?	Seepage from the TSF is expected to contribute to the local groundwater system. Total seepage from the TSF is predicted to be between 60 and 70 L/s at the end of Operations through Post-Closure. Estimates of potential unrecoverable seepage from the TSF to Davidson Creek is predicted to be approximately 1.3 L/s (Section 6.1 of Appendix 5-F).	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1076	Chapter 2 2.6.2.2		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The response indicates a recoverable / unreceoverable ratio for the TSF seepage, in respect of Davidson Creek, is approximately 98/2. Has sensitivity analysis been completed on predicted water quality in the receptor for different recoverable / unrecoverable ratios (i.e. consequence effect)? What is the probability of the ratio being different, for example 90/10, or 95/5? What mitigations are in place, or could be put in place, to address the consequence effect and/or probability to manage any risk that might be identified? Is the stated recoverable / uncoverable ratio (i.e. 98/2) reflective of operations, closure, or both?	Water quality sensitivity analyses have been completed using the predicted upper bound recoverable and unrecoverable TSF seepage rates. A sensitivity analysis assessing the water quality associated with the upper bound seepage estimates from the TSF is captured in Scenario 4 presented in Section 4.4 of Appendix 5-D. Sensitivity analyses of predicted recoverable/unrecoverable seepage rates are presented in Section 5.3 of Appendix 5 F. Unrecoverable seepage from the TSF is estimated to range from 2.5% to 5% of the total seepage based on the results of the base case and seepage sensitivity analyses conducted using the Post-Closure groundwater model summarized in Table 5.5 of Appendix 5-F. The predicted base case and sensitivity scenario seepage results are considered to be reflective of conditions at the end of Operations through Post-closure, when the TSF is at its maximum buildout. Mitigations in place are presented in Table 5.6-1 of Chapter 5. Mitigations related to TSF seepage water quality include subaqueous disposal of PAG water rock and tailings in the TSF, inclusion of an SO2-Air cyanide destruction circuit in the mill to manage cyanide concentrations in mill water, and use of liquid sulfur dioxide in the cyanide destruction circuit to minimize sodium concentrations. Key mitigations related to TSF seepage flow include: •TSF seepage controlled by the low-permeability Zone S core and/or an HDPE geomembrane, a cut-off trench, and the low-permeability subgrade materials in the dam foundation •TSF seepage control/collection with embankment drainage systems that report seepage to the interim ECD and the ECD in addition to the pumping of captured seepage back to the TSF A discussion on contingencies that could be put into place is presented in Section 11.1 of Appendix 9 E. The contingencies related to TSF seepage include: •Implementing additional groundwater interception such as pumping wells, well points, relief wells, or interception trenches. •Implementing groundwater barriers to flow, such as cut-off walls and hydraulic barriers. Cut-off walls could		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1076	Chapter 2 2.6.2.2		LDN/UFN (OKane_Mike O'Kane)		Sep 06, 2022	3	Follow Up		Yes	Thank you for this response; an adapative montioring and management approach, a risk-based decision approach that utlizes the risk matrix developed by LDN/UFN, is required to understand when/if/how, the additional mitgations referenced woudl be implemented. This will require consultation with MMO as to whether monitoring / tracking this issue is captured with permit conditions, or is captured as requirements within the appropriate management plan.	BW Gold acknowledges the comment.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Sep 13	Ready for Publishing
1077	Chapter 2 2.7.1.2	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	4th sentence under "Stream Water Quality Sampling". Needs to be a space between "ALS" and "in"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission	RT; June 20	Ready for Publishing
1078	Chapter 2 2.7.2.3	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	6th paragraph. First sentence. Needs a space between "had" and "one"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission	RT; June 20	Ready for Publishing
1079	Chapter 2 Figure 2.8-4 through 2.8-9		LDN/UFN		Jun 11, 2022	1	New		No	Sampling locations WQ4 exceeds limits for Arsenic, Cadmium, Lead, Manganese, Mercury, Nickel, Silver, and Zinc, but is not stated as an exceedance of guidelines for sediment metals in the paragraph prior (only WQ14 and WQ 19 are referenced as showing exceedances)	Thank you for noting this. BW Gold recognizes that the Application contains some omissions. The statement "2011 and 2012: Arsenic at WQ4 and WQ5; Cadmium at WQ4; Iron at WQ4, Mercury at WQ4, Silver at WQ4, and Zinc at WQ4" should have included "Lead at WQ4, Manganese at WQ4, and Nickel at WQ4". BW Gold will track substantive errors and omissions and will provide a memo that corrects these.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 26	Ready for Publishing
1079	Chapter 2 Figure 2.8-4 through 2.8-9		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide supporting documentation outlining this edit.	A 2022 Cumulative Aquatic Effects Monitoring Program Baseline Report will be provided in 2023. This report is in response to comment #64 to #67 and #77 to #82 regarding aquatic baseline reports and baseline data that were collected between 2011 to 2013 and 2017 (summarised in Sections 2.7 to 2.9 of Chapter 2). The baseline report will document summaries of exceedance frequencies and magnitude of exceedance of a sediment quality guideline, by site and by year.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
1080	Chapter 2 2.9.3.2 (Ageing)	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	Sentence 3. Space needed between "live" and "release"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission	RT; June 20	Ready for Publishing

1081	Appendix 2-D 3.3.5		LDN/UFN		Jun 11, 2022	1	New		No	3 of 18 samples came back with arsenic levels above the threshold. Is there any reasoning or assumptions for why these levels were so elevated (almost 4 times higher in the B horizon?)	There is no specific reason or assumption for why levels of arsenic were higher than thresholds in 3 of 18 samples. Spatial variability in soil metal concentrations is not unusual, and these data represent baseline concentrations of metals in soil (i.e.., not influenced by mining activity).	RT/TD to review	LDN/UFN	Entia		Lesley	AT/KP	Ready for Submission	RT; June 19	Ready for Publishing
1082	Appendix 2-D 3.3.5	Grammar	LDN/UFN		Jun 11, 2022	1	New		No	Refers to the "A horizon... and A horizon, respectively. Were one of these meant to say B horizon?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1083	Appendix 2-J Exec. Summary	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Different coloured fonts used without intention in multiple paragraphs (grey and black)	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission	RT; June 20	Ready for Publishing
1084	Appendix 2-H 3.2		LDN/UFN		Jun 11, 2022	1	New		No	Where were the 890 waste rock samples taken from - are they represented spatially (vertically/horizontally) of all material in the pit shell?	These samples were collected as part of the geochemical characterization program described in AMEC (2014). This report states that "the ABA testing program attempted to sample a broad range of lithologies, grade and locations within the pit." Further, it should be noted that the ARD block model, which is based on ABA and ICP assay results, ensures a highly representative estimate of ARD and ML potential across the deposit.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 28	Ready for Publishing
1085	Appendix 2-J 2.3	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Different coloured fonts used without intention in paragraph two (grey and black) this continues throughout the report	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission	RT; June 20	Ready for Publishing
1086	Appendix 2-J 2.3	Spelling	LDN/UFN		Jun 11, 2022	1	New		No	Rio Tinto spelled Rio Tino immediately after Figure 2.2	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission	RT; June 20	Ready for Publishing
1087	Appendix 2-H 3.2.3.2		LDN/UFN		Jun 11, 2022	1	New		No	What is the relationship between sulfur and sulfate content and the oxide facies (i.e.., is the oxide all low sulfur and mostly as sulfate)? ABA and supporting tests interpretated from classification of material into geochem types (PAG1 etc...) rather than material types.	Total S for the oxide zone samples remains below 1% (90th percentile: 0.25%). The majority of the sulphur is in the form of sulphide S for most oxide zone samples. Sulphate S generally remains low (range: 0.01 to 0.19%, 90th percentile: 0.05%).	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1088	Appendix 2-H 3.2.3.2 pg.. 60		LDN/UFN		Jun 11, 2022	1	New		No	With the adjusted AP for sphalerite and lowering AP - is this material still a problem due to the higher Zn contents and potential mobilisation?	The adjusted AP discussed in this report was not used in the block model or for mine planning. The waste rock for the project will be classified based on NPR derived from ICP-Ca and ICP-S values.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1088	Appendix 2-H 3.2.3.2 pg.. 60		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, the original question/concern has not been adequately addressed. Provide updated documentation for waste rock classification and zinc mobilization and indicate why it was not used in the block model	The adjustment in AP based on Zn content referenced in Section 3.2.3.2 of Appendix 2-H is in relation to the acidity generated by sphalerite (ZnS) oxidation. The section describes an AP adjustment based on sulphide-S associated with pure (no impurities) sphalerite which does not generate acidity when oxidized. This consideration was not carried forward as part of AP estimates in the ARD block model as a conservative assumption. Zn content is incorporated into waste rock classification, as different types of NAG rock are classified based on Zn content.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1089	Appendix 2-H Figure 3-12		LDN/UFN		Jun 11, 2022	1	New		No	Probably not worthwhile using a modified AP for a sample with an AP/MPA ~ 1 kgCaCO3/t?	This comment is acknowledged. Please note that the ZnS adjusted AP presented on this figure will not be used in operational monitoring.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1090	Appendix 2-H 3.2.3.4		LDN/UFN		Jun 11, 2022	1	New		No	Implications of using MPA (total sulfur) to calculate NPR, and employing a NPR of 2 on low sulfur waste (<0.1wt%) to classify materials. Is there enough NPAG material for construction and rehab?	The design studies indicate there is enough non-acid-generating (NAG) waste rock and overburden material for construction and site reclamation.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

1090	Appendix 2-H 3.2.3.4		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide supporting documentation which clearly shows this. Please indicate what plans are in effect in the event that more PAG is encountered.	An annual summary of the mine waste production schedule during operations, including overburden and NAG waste rock and PAG waste rock, is provided in Table 3.3-1 of Chapter 3 of the Application. The information presented includes the destination data for the Overburden (OVB) and non-acid generating (NAG) waste rock, and summarizes quantities planned to be delivered for staged construction of the tailings dam and other site features (e.g. haul roads) and the balance remaining to be delivered to the waste stockpiles. All Potentially Acid Generating (PAG) waste rock is destined for the TSF for disposal. TSF staging (i.e. the rate of rise) is an iterative process, which takes into consideration the waste storage requirements, embankment design concepts, estimated dam construction material requirements for each dam stage, and the availability of dam construction materials in the mine plan. The embankment raising schedule will be reviewed regularly during facility operation to refine plans based on the actual rate of TSF filling, availability of construction materials, and in consideration of any future adjustments to the mine plan or waste materials release (i.e. more or less PAG requiring storage). Additional details related to the TSF design and staging over the life of the mine are included in Appendix 3-K of the Application - please see sections 5.2, 6.2, and Appendix E2 for TSF storage capacity and filling information. The site reclamation prescriptions and soils material balance for closure and reclamation are summarized in Section 4.2 of Chapter 4 of the Application.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1090	Appendix 2-H 3.2.3.4		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		No	What is your plan in the event that more PAG is encountered than has been accounted for (in our experience this is likely). Mitigation plans should be added to the ML/ARD management plan update in Chapter 9.	A similar question was asked by the reveiwer of the ML/ARD management plan (see comment ID 1918). All Potentially Acid Generating (PAG) waste rock is destined for the TSF for disposal. A contingency storage allowance is incorporated in the design basis of the TSF to proactively accommodate potential for increased waste quantities being PAG. The contingency storage allowance is approximately 1.3 Mm3 for Stage 1 and increases up to approximately 5 Mm3 for Stage 2, as summarized in Section 5.6.2 of Appendix 3-J. Thereafter, the staged design elevations for on-going construction of the TSF will be progressively updated as appropriate, based on the amounts tailings and waste rock deposited in prior years and projected for the following years with contingency allowances in consideration for the level of uncertainty in the waste production estimates. Regular review and adjustment of TSF dam raising schedules based on the actual rate of filling is a typical practice that as described in Section 5.2.2 of Appendix 3-K.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
1091	Appendix 2-H 3.2.3.4		LDN/UFN		Jun 11, 2022	1	New		No	Implications of using MPA (total sulfur) to calculate NPR, and employing a NPR of 2 on low sulfur waste (<0.1wt%) to classify materials. Is there enough room in the TSF for PAG and NPAG3 (high Zn) material?	The block model was used to classify material as PAG or NAG3 and estimate quantities of these material types. This uses NPR to classify material as PAG1, PAG2 or NAG. This information was used in the mine plan presented in the Application.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1092	Appendix 2-H Figure 3-30		LDN/UFN		Jun 11, 2022	1	New		No	If waste was classified solely on NPR and that NPR was reduced to < 2, this figure indicates that some PAG (based on the NAG pH results) would be incorrectly classified as NPAG	Using an NPR lower than 2 to classify PAG is not proposed.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1093	Appendix 2-H Figure 3-34, 35, 36, 37		LDN/UFN		Jun 11, 2022	1	New		No	What is the significance of the colours - are these the different waste classifications?	Yes, the different colours indicate the five different waste classifications and the two modified humidity cell tests.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1094	Appendix 2-H 3.2.9.3		LDN/UFN		Jun 11, 2022	1	New		No	Would have been good to see discussion between Zn contents and risk of mobilisation i.e... does NAG3 have same risk in short/term long as PAG1 and 2 for Zn mobilisation?	The Zn loading rates were found to vary by several orders of magnitude within humidity cell samples from the same mine rock management unit. Much of this variability can be attributed to pH, with even a minor decline in pH leading to a significant acceleration in humidity cell loading rates. Under neutral pH conditions, the Zn loading rate is expected to be dependent on the solid phase Zn content. A further discussion of the correlation between pH, solid phase metal content and metal loading rates was included in Section 3.2.1.2 of the Source Term report (Appendix A.6 of Appendix 5-D of the Application).	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1095	Appendix 2-H 3.2.9.3		LDN/UFN		Jun 11, 2022	1	New		No	Implications for storage - will storing NAG3 with PAG 1 and 2 increase mobilisation risk in NAG3 under potentially acid conditions? The NAG column with highest Zn mobility did not have the highest Zn content	As outlined in the response to Comment #1094, much of the variability in the Zn loading rates in the humidity cell tests can be attributed to pH. Increased Zn mobilization from NAG3 material would be expected if the pH decreased.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1095	Appendix 2-H 3.2.9.3		LDN/UFN (OKane_Kirstin e Malloch, Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Noted. Please provide supporting documentation for the risk of increased mobilisation of Zn from NAG3 from storage with PAG1 and PAG2 in the TSF as a potential project risk and risk to water quality, and mitigation strategies to address increased Zn mobilization due to a drop in pH.	Co-disposal of NAG 3 with PAG 1 and PAG 2 may result in stripping of NP associated with NAG 3 mine rock. NAG 3 has similar metal content as PAG 1 and PAG2, and thus would likely have similar metal leaching potential under acidic conditions. Development of acidic drainage from PAG rock stored within the TMF is included into the water quality model, and thus is incorporated into existing mitigations. It should be noted that NAG 3 makes up a minor percentage of waste rock (5%) stored in the TSF impoundment, with a majority of the mine stored being composed of PAG1 (75%) and PAG 2 (20%).		LDN/UFN	Lorax					GM; Aug 11	Ready for Publishing
1096	Appendix 2-H 3.2.10		LDN/UFN		Jun 11, 2022	1	New		No	Re modified HCTs - what is the significance fo increasing leaching duration time in relationship to site conditions and the climate, does this column set up reflect what is expected on site better	The adjustment to the regular protocol was intended to provide a longer period of time between leaching events, allowing for a greater accumulation of oxidation products than in the regular humidity cell routine. It should be noted that these modified HCTs were not incorporated into the current source terms.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1096	Appendix 2-H 3.2.10		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	provide supporting documentation detailing this, as well as justification for not including modified HCTs in the current source terms.	The test results were documented in Appendix 2-H, no further documentation of the experiment is available. The subset of HCTs ran using the modified tests were not incorporated into the source term calculations to maintain consistency in analytical procedure used to develop loading rates for different rock types.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1097	Appendix 2-H 3.2.10		LDN/UFN		Jun 11, 2022	1	New		No	Regarding MHCT-566 and MHCT-606 would have been useful to have defined what these were in Table 3-29, as there are used in the graphs but not defined until afterwards	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1098	Appendix 2-H 3.2.11		LDN/UFN		Jun 11, 2022	1	New		No	Would have been worthwhile including a NAG3 high Zn sample to look at the effects of Zn mobility under subaqueous conditions if NPAG3 is being stored with PAG	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1099	Appendix 2-H Figure 3.47		LDN/UFN		Jun 11, 2022	1	New		No	The sulfate release rates are high - would suggest active oxidation for the submerged materials - oxygen being supplied through the recycling of water?	The columns were set up to allow for a vertical upward flow of de-oxygenated water (nitrogen gas had been bubbled through the water to strip out oxygen) through the waste rock. However, the DO concentrations remained above 5 mg/L in several samples. The sulphate concentrations in the saturated columns were relatively low (<120 mg/L), with concentrations decreasing to around 10 mg/L in later weeks.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1100	Appendix 2-H Figure 3.53		LDN/UFN		Jun 11, 2022	1	New		No	Do these columns suggest that As mobilisation is higher under submerged conditions?	After 15-20 weeks, the As concentrations in BW-ARD-611 leachate stabilized around 0.01 mg/L, while the As concentrations in BW-ARD-672 leachate stabilized around 0.003 mg/L. Although As mobilization may be higher under submerged conditions, these As concentrations remain relatively low, and are approximately 2x or less than the BC water quality guideline.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1101	Appendix 2-H 3.2.14		LDN/UFN		Jun 11, 2022	1	New		No	Is there mineralogical data from BW-ARD-037 to know what type of sulfide minerals are in this sample to relate back to the oxidation rate	XRD data is available for a subsample of BW-ARD-037 prior to humidity cell testing. This sample contained sphalerite (0.74%) and pyrite (0.42%).	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1102	Appendix 2-H 3.2.15		LDN/UFN		Jun 11, 2022	1	New		No	No comment on how siderite affects the ABCC results - was this detected in any of the samples submitted for ABCC. It was indicated in this report that siderite content would affect the availability of NP, and samples containing siderite should be tested using ABCC	Mineralogy was not conducted on the samples submitted for ABCC.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing

1103	Appendix 2-H 3.2.16		LDN/UFN		Jun 11, 2022	1	New		No	Was there a increase in mobility for some other metals at the higher pHs (>10), or was only Fe, Cd, and Zn looked at? May be an issue for Al, which other tests indicated that there was a risk for mobilisation.	Cadmium and zinc were focused on in the discussion, as these were identified as parameters of concern. Aluminum concentrations showed an increasing trend from neutral to alkaline pH. The results from the neutralization tests at pH 10, along with results from a high density sludge clarifier at an analogue mine site, were considered in the development of source terms for the LGO lime neutralization system in the site water balance/water quality model.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1104	Appendix 2-H 3.2.17		LDN/UFN		Jun 11, 2022	1	New		No	Concluding remarks indicate that oxygen-deficient conditions were inhibiting sulfide oxidation however figures suggest that sulfate release was higher throughout the test period than for HCTs operated under standardized conditions. Is the sulfate release from soluble sulfate minerals in this sample (ARD-672)	The saturated column results show a rapid decline in sulphate concentrations after tests were initiated. This is consistent with release being dominated by an initial flush of oxidation products, followed by rinsing of more refractory mineral phases. The sulphate concentrations in ARD-672 decreased from approximately 120 mg/L to 10 mg/L. No mineralogy data was available for ARD-672, but the available mineralogy for other samples from the project does not indicate the presence of soluble sulphate minerals.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1105	Appendix 2-H 3.2.17		LDN/UFN		Jun 11, 2022	1	New		No	Concluding remarks indicate that metal loads can be reduced by increasing pH; however, only Cd, Zn and Fe were looked at and the effected on increasing pH on other metals was not discussed in the report.	Cadmium and zinc were focused on in the discussion, as these were identified as parameters of concern. Metals precipitation using lime is a common, industry-accepted practice. The source term for the lime neutralization system used both results from the neutralization tests (pH 10) and from a site analogue.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1106	Appendix 2-H 3.3.2		LDN/UFN		Jun 11, 2022	1	New		No	For the ore it was noted that higher Se occurred with samples with Zn >1000mg/kg - is this relationship also seen in the waste samples?	There is a weak positive correlation between Se and Zn for the waste rock samples (R^2 = 0.4). However, the majority (95th percentile) value for is Se ≤ 1.1 ppm, and Se is not considered a parameter of concern for the project based on the site geochemical characterization.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1107	Appendix 2-J 2.5.2.3	Spelling	LDN/UFN		Jun 11, 2022	1	New		No	Gravel sized clasts o bedrock following Figure 2.6 should say of. Also issues with font colorings	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB, 20-Jun	Ready for Publishing
1107	Appendix 2-J 2.5.2.3	Spelling	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Our understanding is this comment relates to the 2020 groundwater baseline report (Application Appendix 2-J). Baseline reports submitted with the Application will not be updated. However, this comment is noted and BW Gold will work to address such editorial errors in future submissions.		LDN/UFN	Lorax				Ready for Submission	GM; Aug 11	Ready for Publishing
1108	Appendix 2-J 4.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Artesian conditions and high GWL in the pit area discovered during drilling. This will require a significant dewatering plan to be put in place to handle the large inflow of groundwater into the open pit.	Description of the open pit dewatering systems is discussed in Section 6.3 of the Open Pit Slope Design Report (Appendix 3-B). In-Pit dewatering wells will remove groundwater from the drainable porosity of the higher hydraulic conductivity zone and groundwater inflows contributed from the surrounding lower permeability rock. Perimeter dewatering wells along the south highwall will lower and extend the water level drawdown beyond the pit walls to achieve the depressurization targets established by the open pit wall stability analyses.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1109	Appendices 2-K Figure 3.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Why was Top Lake not monitored for baseline water quality? There are tributary streams from the LSA that flow to it.	The tributaries within the LSA that enter Top Lake are not expected to be influenced by the Project. Top Lake was not selected as a lake for reference sites. Not all lakes or streams within the LSA were sampled as part of baseline programs, as baseline programs were intended to characterize water chemistry in streams or lakes potentially affected by the Project or those selected as reference sites.	RT/TD to review	LDN/UFN	ERM	Entia		RT	Ready for Submission	RT; June 20	Ready for Publishing
1109	Appendices 2-K Figure 3.1-1		LDN/UFN (OKane_Blake Weinrauch; Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide supporting documentation which clearly shows tributaries entering Top Lake are not expected to be impacted by the project, considering topography.	Watershed boundaries are shown on Figure 2.7-1 in Chapter 2 of the Application, representing height of land boundaries and drainage areas. Top Lake is located in the Fawnie Creek watershed (which is not specifically outlined or labelled on Figure 2.7-1, although Fawnie Creek and Top Lake are shown along the west-northwest side of the map), which is located upstream, upgradient, and upwind (based on prevailing winds) from the Project mine site. There are no tributaries to Top Lake that extend into the Davidson Creek or Creek 661 watersheds, which are the watershed that are expected to receive effluent discharge and/or seepage. The Creek 705 watershed to the west of the Davidson Creek watershed is not expected to be influenced by discharge or seepage from the Project (and there are no tributaries to Top Lake that extend into the Creek 705 watershed).		LDN/UFN	Entia	ERM			Ready for Submission	RT; Aug. 7	Ready for Publishing
1110	Appendix 2-A 1.1 paragraph 3		LDN/UFN		Jun 11, 2022	1	New		No	Is the Blackwater area and Blackwater property the same? Both terms being used - pick one and use throughout.	The term "area" is more general than the term "property" in the context of the discussion presented in the report. The difference between the two is not pertinent to the report content. Thank you for the editorial suggestion. No changes will be made to the way the information is presented.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1111	Appendix 2-A 2.5 (page 18)		LDN/UFN		Jun 11, 2022	1	New		No	"Solar radiation changes with both latitude and elevation, and for most concurrent months the mean and maximum solar radiation were similar at both stations, with a few exceptions." - what exceptions?	These exceptions are months, where the mean and maximum solar radiation values for the two stations deviated from each more than other months. The two stations are located at slightly different elevations and locations and, consequently, the climatic conditions can vary between them.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1112	Appendix 2-A table 2.1.3		LDN/UFN		Jun 11, 2022	1	New		No	separate events by date as well as duration to make it more clear when an event occurs at one station but not the other.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1113	Appendix 2-B 2.9 paragraph 2		LDN/UFN		Jun 11, 2022	1	New		No	The two stations installed at site change "at site" to at the Project	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1114	Appendix 2-B		LDN/UFN		Jun 11, 2022	1	New		No	define seasonal months?	The reference to the application or supporting document appears incomplete and there is no context provided for review of the comment. Thank you for the editorial suggestion. No changes will be made to the way the information is presented.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1115	Appendix 2-B Figure 2.5 and 2.6		LDN/UFN		Jun 11, 2022	1	New		No	captions don't match figure axis labels/text citation.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1116	Appendix 2-B report page 13	spelling	LDN/UFN		Jun 11, 2022	1	New		No	spelling error - "values"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1117	Appendix 2-B 2.6.1	grammar	LDN/UFN		Jun 11, 2022	1	New		No	change similar than to "similar to those provided by the Hargreaves equation"	Thank you for noting this. We agree that the selecting wording could be improved. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1118	Appendix 2-B pg.. 26		LDN/UFN		Jun 11, 2022	1	New		No	capitalize the Project in "Blackwater High station and the project streamflow stations."	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1119	Appendix 2-B 2.7.5 pg.. 32	Inconsistency in text.	LDN/UFN		Jun 11, 2022	1	New		No	Two regional snow course stations are located within 75 km of the Project site change 75 km to 100km, as bird creek station is 97 km from the project.	Thank you for noting this. We agree that changing 75 km to 100 km in the text would be more accurate. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1120	Appendix 2-B 2.7.5 pg.. 32		LDN/UFN		Jun 11, 2022	1	New		No	Data collection at the Project sites occurs at less regular intervals. - how often?	The baseline data collection frequency varied by site and year. Please refer to Appendix 2-A, (including Table 2.14), for details.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1121	Appendix 2-B 2.7.5 pg. 33		LDN/UFN		Jun 11, 2022	1	New		No	"In contrast, the Mount Swannell regional snow course station snowpack peaks later in the year, with most snowmelt observed in May and June." - due to higher elevation? Add justification for this if possible	It appears that the difference is likely primarily due to the higher elevation of the Mount Swannell station. Also, aspect and possible local snow drifting patterns may have an effect. In addition, the different periods of record likely have some influence, since the site records are for the period of 2012-2020 while the Mount Swannell station record is for the period of 1989-2019. The first half of the Swannell station record was more heavily influenced by La Nina cycles of ENSO, which tend to produce cooler temperatures, larger snowpacks, and a later onset of freshet.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1122	Appendix 2-B Table 2.14		LDN/UFN		Jun 11, 2022	1	New		No	max SWE at project is 178mm. Return period estimates seem high compared to these.	The mean SWE is 178 mm, not the maximum SWE.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1123	Appendix 2-B		LDN/UFN		Jun 11, 2022	1	New		No	Estimates of the mean and standard deviation were derived directly from the RFA, to which a factor of 1.5 was applied" "The estimated PMP value based on RFA is 195 mm." - why not calculate PMP from site data? Estimate seems high. Has it been compared to local historical storms? Has a climate change estimate been taken into account?	The RFA method was just one of several used to estimate extreme precipitation events at the Project site. The recommended method was the "scaling Vanderhoof" method, which does incorporate project-specific data. All the extreme precipitation events are summarized in Table 2.15 in Appendix 2-B. These estimates do not consider climate change. A climate change uplift is recommended to be applied to the design event for any structure or facility.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing

1123	Appendix 2-B		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, not all aspects have been addressed so I will re-phrase. Please provide estimates which consider climate change and compare to local historical storms.	In the peak flow and climate change sections of Appendix 2-B (the 2020 Hydrometeorology Report), it is stated that a climate change safety factor of 1.15 is recommended to be applied to peak flow values that are used for the design of structures with a long design life. A similar uplift factor should be applied to extreme precipitation when designing structures that have an extended design life.		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1124	Appendix 2-B 3.2.1 first sentence		LDN/UFN		Jun 11, 2022	1	New		No	capitalize the Project	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1125	Appendix 2-B 3.2.1		LDN/UFN		Jun 11, 2022	1	New		No	That shortened the list of suitable stations for assessment to three, but the Chedakuz Creek station was added to the list despite its short record because of its proximity to the Project. - reorganize this sentence	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1126	Appendix 2-B 3.2.1		LDN/UFN		Jun 11, 2022	1	New		No	and there are good correlations between flows in the Dean River and those in the Project area streams. - Define good correlations.	The Dean river was chosen because it has a long-term flow record that contains a concurrent period with the Project stations. The flow conditions in the Dean River are generally representative of the Project Area hydrology stations (i.e.. low gradient watershed with similar biogeoclimatic zones), and similar flow patterns are found between the two.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1127	Appendix 2-B 3.2.2		LDN/UFN		Jun 11, 2022	1	New		No	"Frequency pairing is based on correlating values from two data sets for a concurrent period of record that are paired according to their frequency of occurrence, in contrast to linear regression that involves regressing data sets paired according to their time of occurrence." - Split into 2 sentences or restructure.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1128	Appendix 2-B Figure 3.3		LDN/UFN		Jun 11, 2022	1	New		No	extrapolated upper end - how was the slope determined? It appears to be vertically offset slightly.	The slope of the extrapolation was determined by approximating the average slope of the preceding paired points. This line is based of the highest frequency pairing point and extends out to prevent the synthetic flow from having any jumps.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1129	Appendix 2-B 3.2.5		LDN/UFN		Jun 11, 2022	1	New		No	The freshet unit discharge at H6 is approximately half that of H4B, and even its summer and winter baseflows are lower. - restructure this. Ex: Summer and winter baseflows at H6 are lower than at H4B, with the freshet unit discharge being approximately half of that at H4B.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1130	Appendix 2-B 3.2.5 pg.. 48		LDN/UFN		Jun 11, 2022	1	New		No	Stations H2, H2B, and H4B all have similar mean annual unit runoff, with H2B, which is between the other two stations, having the slightly higher value, suggesting that - restructure this	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1131	Appendix 2-B 4.1		LDN/UFN		Jun 11, 2022	1	New		No	RCP2.6 is listed twice in bullet list	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1132	Appendix 2-B 4.3		LDN/UFN		Jun 11, 2022	1	New		No	which suggests that annual mean flows are generally getting a little higher, or at the very least that the annual flows are becoming more variable. - change wording, ex: annual mean flows are generally increasing	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1133	Appendix 2-I 1		LDN/UFN		Jun 11, 2022	1	New		No	proposed mine to just under 1,700 m south of the Proposed Open Pit. - inconsistent capitalization.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1134	Appendix 2-I 1		LDN/UFN		Jun 11, 2022	1	New		No	The Davidson Creek valley is incised locally and flows northeast from the site - Change the site to the Project for consistency	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1135	Appendix 2-I 1		LDN/UFN		Jun 11, 2022	1	New		No	Fawnie Creek continues to Johnny Lake, into Entiako Provincial Park, and ultimately forms a portion of the flow of the Entiako River into the Nechako Reservoir.	BW Gold acknowledges this comment, thank you.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1136	Appendix 2-I 2.1.1		LDN/UFN		Jun 11, 2022	1	New		No	- Upper Davidson Creek – H2 was installed in May 2011 to monitor streamflow. Specify it is still active for consistency with other stations in the list.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1137	Appendix 2-I 2.1.5		LDN/UFN		Jun 11, 2022	1	New		No	Streamflow monitoring stations is currently operated at two locations - change is to are	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1138	Appendix 2-I 2.2		LDN/UFN		Jun 11, 2022	1	New		No	and is a curve exponent. - how is determined? n n	n is a constant that depends on the channel shape. As with all the constants in the rating curve equation, it is iteratively determined during the process of delineating the rating curve through the measured rating points.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1139	Appendix 2-I 2.2		LDN/UFN		Jun 11, 2022	1	New		No	At sites, whose channel characteristics - remove comma after sites	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1140	Appendix 2-I 2.2, final sentence		LDN/UFN		Jun 11, 2022	1	New		No	and to avoid confusion in showing up to 10 different measurement colors for the different years. - reword, ex: for visual clarity	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1141	Appendix 2-I figure 2.2		LDN/UFN		Jun 11, 2022	1	New		No	what is the maximum recorded stage? Make the marker more visible and add to legend.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1142	Appendix 2-I 2.3		LDN/UFN		Jun 11, 2022	1	New		No	during open water conditions, when the stage-discharge - remove comma	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1143	Appendix 2-I 2.3		LDN/UFN		Jun 11, 2022	1	New		No	clock drift, were reviewed - remove comma	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1144	Appendix 2-I 2.3		LDN/UFN		Jun 11, 2022	1	New		No	as observed during winter site visits. - field-verified during winter site visits	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1145	Appendix 2-I figure 2.3		LDN/UFN		Jun 11, 2022	1	New		No	discuss relationship between hydrograph and measured data	The measured data are discrete flow measurements taken on site, while the discharge hydrograph is a calculated figure developed by using the rating curve to translate the stage hydrograph into flow data.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1146	Appendix 2-I 2.4		LDN/UFN		Jun 11, 2022	1	New		No	The second peaks, particularly in 2016, indicate unusually wet summer conditions due to convective storms. - the hydrograph doesn't tell us this is due to convective storms, but it can support the hypothesis based off other data.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1147	Appendix 2-I 2.5, pg.. 18		LDN/UFN		Jun 11, 2022	1	New		No	The unit runoff values and annual patterns for these two stations are very similar, though however, H12 exhibits slightly higher freshet unit peak flows.	Agreed.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1148	Appendix 2-I 2.6		LDN/UFN		Jun 11, 2022	1	New		No	Considering that air temperatures routinely drop below -5oC during the winter and that freezing of the sensor could cause pressures to exceed pressures the equivalent of 4 m of water depth,	BW Gold would appreciate additional clarity from LDN/UFN about this comment, as we are not clear how it related to the referenced part of the Application. BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1149	Appendix 2-I 2.6 pg.. 20		LDN/UFN		Jun 11, 2022	1	New		No	Caution should, however, be applied when considering extrapolated discharges. - However, caution should be practiced when considering extrapolated discharge.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1150	Appendix 2-I 3.1.1		LDN/UFN		Jun 11, 2022	1	New		No	The pressure transducers are located at the end of the aluminum pipes, located a few centimetres above the creek bottom.	BW Gold would appreciate additional clarity from LDN/UFN about this comment, as we are not clear how it related to the referenced part of the Application. BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1151	Appendix 2-I Figure 3.4		LDN/UFN		Jun 11, 2022	1	New		No	no ST-KO data between Feb 2019 and Dec 2019?	Yes, the presented data records show there is a data gap during this period.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1152	Appendix 2-I Figure 3.5		LDN/UFN		Jun 11, 2022	1	New		No	no ST-DEEP data between Jan 2018 and Sept 2019?	Yes, the presented data records show there is a data gap during this period.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1153	Appendix 2-I 3.3.3		LDN/UFN		Jun 11, 2022	1	New		No	Spatial comparison of average daily water temperatures at dedicated water temperature stations along Davidson Creek, from 2015 to 2020, - remove commas	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1154	Appendix 2-I 3.3.3		LDN/UFN		Jun 11, 2022	1	New		No	During the winter, the warmest water temperatures were are recorded at the higher elevation sites.	BW Gold would appreciate additional clarity from LDN/UFN about this comment, as we are not clear how it related to the referenced part of the Application. BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1155	Appendix 2-I Figure A 2.3		LDN/UFN		Jun 11, 2022	1	New		No	Add a note that the station was decommissioned from 2014-2019, as stated in 2.1	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1156	Appendix 2-I Figure A 2.14		LDN/UFN		Jun 11, 2022	1	New		No	update date axis font and format to match y axis and figure 2.13	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing

1157	Appendix 2-I Figure A 2.19		LDN/UFN		Jun 11, 2022	1	New		No	same as above	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1158	Appendix 2-I 3.1 paragraph 4		LDN/UFN		Jun 11, 2022	1	New		No	There are also no discharge hydrograph data for 2019 or 2020 because the creek is suspected to have been impacted by beaver activity. - I don't think this needs to be repeated as its stated in the above paragraph already.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1159	Appendix 2-I Figure A 3.1 & 3.2		LDN/UFN		Jun 11, 2022	1	New		No	re-name "ignored measurements". Ex: outliers or erroneous data	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1160	Appendix 2-I Figure A 3.3		LDN/UFN		Jun 11, 2022	1	New		No	add a note to address why there is no hydrograph data in 2014-2017.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1161	Appendix 2-I Figure A 3.5		LDN/UFN		Jun 11, 2022	1	New		No	Nov & Dec 2014 points should be connected?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1162	Appendix 2-I Figure A 4.1 & 4.2		LDN/UFN		Jun 11, 2022	1	New		No	rating curves for '2016' and '2011-2015 & 2017' are the same cooler.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1163	Appendix 2-I Figure A 4.10		LDN/UFN		Jun 11, 2022	1	New		No	connect dec 2019 data point to the rest of the series	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1164	Appendix 2-I 4.3		LDN/UFN		Jun 11, 2022	1	New		No	The station consisted consists of a KPSI pressure transducer	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1165	Appendix 2-I Figure A 4.13 & 4.14		LDN/UFN		Jun 11, 2022	1	New		No	re-name "ignored measurements". Ex: outliers or erroneous data, but there are none of these points visible in the plot. Either modify the scale to show them, or remove from legend.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1166	Appendix 2-I Table B 2.3		LDN/UFN		Jun 11, 2022	1	New		No	change wording of "ignored" to something else, and provide rationalization	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1167	Appendix 2-I Table B 2.7		LDN/UFN		Jun 11, 2022	1	New		No	Why is May 23 2018 greyed out? Add a comment	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1168	Appendix 2-I Table B 2.19 & 2.21 & 4.5		LDN/UFN		Jun 11, 2022	1	New		No	change wording of "ignored" to something else, and provide rationalization	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1169	Appendix 2-I Table B 3.1		LDN/UFN		Jun 11, 2022	1	New		No	the difference between logged and measured water temp doesn't jive. Double check logged temps because they don't seem right	Thank you for noting this. The incorrect format was selected for the in situ and logged water temperature columns in this table; Figure B 3.1 presents the correct temperatures for this site. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1169	Appendix 2-I Table B 3.1		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Comment	No	Provide documentation for this update.	Please refer to attachment "R2_LDN_UFN Hydrology Comment ID 1169.pdf".		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1170	Appendix 2-I Table B 6.3		LDN/UFN		Jun 11, 2022	1	New		No	How did you decide the top 3 sets of values are anomalous? They don't seem totally unreasonable given the seasons	The differences between the in-situ water temperatures minus the logged water temperatures for these three site visits are greater than for the other visits, and they consequently are considered to be of poor measurement quality.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1171	Appendix 2-J executive summary, III of X		LDN/UFN		Jun 11, 2022	1	New		No	These sites tend to have a hydrochemical type similar to glaciofluvial groundwater or similar to glacial till at some sites in Creek 661. - what?	Thank you for noting this. The text should read: "These sites tend to have a hydrochemical type similar to groundwater samples obtained from glaciofluvial deposits at the site, or similar to samples obtained from glacial till deposits at some sites in Creek 661."	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1172	Appendix 2-J		LDN/UFN		Jun 11, 2022	1	New		No	generally do not generally report guideline exceedances. - remove one of the "generallys"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1173	Appendix 2-J Abbreviations		LDN/UFN		Jun 11, 2022	1	New		No	BCWQGBC. - update to BG WQG	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1174	Appendix 2-J 2.4.2		LDN/UFN		Jun 11, 2022	1	New		No	With the continued subduction under the North American plate, post-accretionary stratigraphy deposited over the Stikine during the Middle Jurassic to Early Paleocene - can you elaborate on this? What is the stratigraphy?	Discussion regarding the regional bedrock geology is intended to be general. Stratigraphy deposited over the Stikine and Cache Creek Terranes during the Middle Jurassic to Early Paleocene includes marine and non-sediments of the Bowser Lake Group and is locally interlayered with sediments of the Hazelton Group. These units exist as mudstones, siltstones, sandstones and conglomerates at the project.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1175	Appendix 2-J Figure 2.4		LDN/UFN		Jun 11, 2022	1	New		No	Are you able to overlay the project footprint on this figure?	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1176	Appendix 2-J 2.5.1		LDN/UFN		Jun 11, 2022	1	New		No	More detail above simply "bedrock" and "weathered bedrock". What are the lithologies present under "holocene deposits"and Glaciation deposits, etc...? (glaciofluvial - coarse sand/fine gravel? Etc.).	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 20-Jun	Ready for Publishing
1177	Appendix 2-J 2.5.3.3 pg.. 27		LDN/UFN		Jun 11, 2022	1	New		No	and travel gravel. Is this a typo? Trace gravel?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1178	Appendix 2-J Table 2.3		LDN/UFN		Jun 11, 2022	1	New		No	Is water level below ground surface, or below top of casing? Is there elevation data for the datum used, and screened intervals?	Water levels presented in Table 2.3 of the 2020 Groundwater Baseline Report were obtained from WWAL (2013b), as indicated by the footnote. The original table and text do not indicate if water levels are presented as meters below ground surface (mbgs) or as meters below top of casing (mbtoc). However, water levels for wells Well 1 and Well 2 are believed to have been obtained from the Well Construction Reports, where the values are reported as mbtoc. Details are not known regarding if water levels were originally presented as mbgs or mbtoc at Well 3 and Well 4. Available well installation logs for the registered wells are provided in Appendix B1 of the 2020 Groundwater Baseline Report. Ground elevation, screen interval data and available water level measurements are presented in Table C1 of the 2020 Groundwater Baseline Report. Data regarding the Canadian Forest Service Products Ltd. Well were not included, as it is outside of the Regional Study Area.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1179	Appendix 2-J 3.3.4 last sentence		LDN/UFN		Jun 11, 2022	1	New		No	All wells are included in the water level monitoring program. - if well integrity issues exist which limits ability to use in water quality, they should not be used in water level studies either. Completion issues, development issues, damaged seal etc... impacts reliability of water levels.	BW Gold acknowledges this comment.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1179	Appendix 2-J 3.3.4 last sentence		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide supporting documentation justifying inclusion of all wells in program, including those with well integrity issues. Show how this doesn't impact the hydrogeological characterization.	Elevated turbidity at monitoring wells MW12-06D, MW12-10D, and MW12-13D, as discussed in Section 3.3.4 of Appendix 2-J, is attributed to the geologic conditions of the screened intervals (i.e., fine grained silty geologic horizons or low permeability bedrock) and not attributed to well integrity or damage. The continuous long-term record of water level data from these sites are considered to be unaffected by the higher turbidity in the well and the aforementioned monitoring wells were therefore included in the baseline water level monitoring program. As discussed in Section 3.3.4, groundwater samples are not collected from those three wells. Monitoring wells included in the mine site groundwater monitoring program are discussed in Section 7.3.4.3 of Appendix 9-E. The rationale for inclusion of each monitoring well in the monitoring program is discussed in that section.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
1180	Appendix 2-J 3.5.3		LDN/UFN		Jun 11, 2022	1	New		No	Standpipe piezometers installed after 2013 were not developed prior to response testing. -why? Response tests should not be conducted unless well has been developed, unless conducting development tests.	Additional resources were not available to direct towards developing the standpipe piezometers that were installed after 2013 prior to response testing. The response tests were conducted with the resources available in order to get estimates of hydraulic conductivity at the wells.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing

1180	Appendix 2-J 3.5.3		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide documentation of sensitivity analyses conducted on how undeveloped well estimates impact overall hydraulic conductivity.	Please see attachment "R2_LDN UFN Hydrogeology Comment ID 1180.pdf".		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1181	Appendix 2-J 3.5.3		LDN/UFN		Jun 11, 2022	1	New		No	analyzed using either Hvorslev (1951), Cooper, Bredehoft, and Papadopulos (1967), or van der Kamp (1976) methods. -justification for these methods? KGS is typically the most robust and accurate test, followed by Bouwer-Rice. Why weren't these used?	This comment refers to a selection of analytical methods used to estimate local-scale hydraulic conductivity values based on the response in a standpipe piezometer or monitoring well to a water level change. The analysis method for each test was selected by the analyst based on several factors. The following are some brief comments on these analytical methods to provide some context on the application of each method. 1.Hvorslev analysis: This method is generally considered the easiest to apply, with only a few simple parameter selections. The method does not consider storage, resulting in many, if not most, data deviating from the theoretical straight line. As a result, methods are applied to select a straight line fit that will yield a more representative hydraulic conductivity value. Although the geometry of the installation may be restrictive, generally, the length of screened interval is much larger compared to the diameter of the well, so that end effects are not an important consideration. 2.Bouwer and Rice analysis: Similar to the Hvorslev method, this method does not directly consider storage, so the method includes selection of an appropriate straight line based on the data. This method allows the aquifer upper and lower boundaries to be taken into account and provides more flexibility in geometry. The analysis also allows estimates of hydraulic conductivity for an unconfined aquifer. The Hvorslev and Bouwer and Rice analyses yield similar estimates. 3.Cooper, Bredehoeft and Papadopulos analysis: This method provides a more rigorous analysis, with the inclusion of storage in the estimate of hydraulic conductivity. A disadvantage is that the aquifer is assumed to be completely penetrated by the sand pack. As with the zero storage methods above, if the sand pack is much greater than the well diameter, the effect on the estimate is limited. Although not as simple as above, this type curve solution method is still relatively easily applied. 4.Kansas Geological Survey analysis: This method is the most rigorous for slug test analysis, including storage and a variety of geometries. Because of the number of variables allowed, the method is generally limited to computer-aided methods based on nonlinear regression analysis. 5.van der Kamp analysis: Most response tests are overdamped, and the above methods refer to those cases. For some slug tests completed within very permeable formations, the response may be underdamped, with an oscillatory recovery. For these cases, the van der Kamp method was chosen for an estimate of hydraulic conductivity. There are many field conditions that impact the reliability of a well response for estimating hydraulic conductivity. These include:	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1182	Appendix 2-J Table 3.2 to 3.4		LDN/UFN		Jun 11, 2022	1	New		No	it would be helpful to include the hydrostratigraphic units the wells are completed in, and indicate nested pairs	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1183	Appendix 2-J Figure4.2, note 3		LDN/UFN		Jun 11, 2022	1	New		No	change full take to high take to remain consistent with how it's defined in the text	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1184	Appendix 2-J 4.2.2		LDN/UFN		Jun 11, 2022	1	New		No	be consistent in referring to water levels (mbgs vs masl).	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Jordan/Cindy	GM	Ready for Submission	CB, 17-Jun	Ready for Publishing
1185	Appendix 2-J 4.2.2		LDN/UFN		Jun 11, 2022	1	New		No	artesian (above ground) - artesian has already been defined so don't need to define it again	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1186	Appendix 2-J Figure 4.6		LDN/UFN		Jun 11, 2022	1	New		No	Water elevation contours should be created for each hydrostratigraphic unit independently. Does this figure include all units combined?	Separate figures to present piezometric elevations in different hydrostratigraphic units was one of the original intentions. However after evaluating the available data, creating contours of the inferred phreatic surface across the site was decided as the best approach to present the available water level data spatially. While many sites with water level data exist, the available data separated out into different hydrostratigraphic units is too spreadout or sparse to contour across the site for many of the units. Water level measurements from well screens installed in bedrock are underlined on the figure to highlight the difference between measurements in overburden and bedrock wells.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1187	Appendix 2-J 4.2.3		LDN/UFN		Jun 11, 2022	1	New		No	The downward hydraulic gradients make identifying the phreatic surface difficult. - ???	Yes. Please review the commentary following this statement in detail for further clarification.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1188	Appendix 2-J Table 4.2		LDN/UFN		Jun 11, 2022	1	New		No	Specific storage and yield doesn't have to be estimated from literature if reliable K tests performed. Each test will provide an estimate of Ss or Sy depending on the solution used.	A recommendation in guidance documents is that storage properties are best based on large-scale pumping test results, and when those are not available the values are taken from published values or from data at nearby sites (Guidelines for Groundwater Modelling to Assess Impacts of Proposed Natural Resource Development Activities, Wels et al., 2012).	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1189	Appendix 2-J 4.3.2 p 68		LDN/UFN		Jun 11, 2022	1	New		No	• Competent bedrock – The Water wells across the site may …. Existing wells at the site installed in bedrock are A bedrock aquifer at TW13-04 (WWAL, 2013a). - is this bullet unfinished?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1190	Appendix 2-J 4.3.5		LDN/UFN		Jun 11, 2022	1	New		No	Consider presenting this section in a table instead	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1191	Appendix 2-J 5.3.4		LDN/UFN		Jun 11, 2022	1	New		No	Median TDS concentrations are between approximately 40 mg/L and 170 mg/L in most wells and show little variability within each well. The exception to this is seen in wells MW12-02D, MW12-06D, GT19-14, and MW12-01D, with median concentrations greater than 200 mg/L. - the difference between 170 and 200 mg/L TDS is pretty negligible. I don't think they need to be differentiated - rather, I would say all TDS is between approximately 40-200 mg/L, especially because they are all well below the drinking water guideline of 500 mg/L	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1192	Appendix 2-J 5.3.5		LDN/UFN		Jun 11, 2022	1	New		No	There are no guideline exceedances for - reiterate what guidelines being used if stating there are no exceedances. Ex: there are no parameters that exceed the applied BC WQG for freshwater aquatic life or drinking water.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1193	Appendix 2-J 6.2		LDN/UFN		Jun 11, 2022	1	New		No	zones comprised of coarse-grained material could be a source of water supply, although it may not be very productive given the higher percent of fines in the deposit. - have these intervals been hydraulically tested? I recall earlier in the report it was stated they weren't of sufficient extent to be considered water sources. Confirm.	No larger-scale hydraulic tests (i.e., pumping tests) have been conducted in the glacial till, only results of local-scale response testing is available for the glacial till unit.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1194	Appendix 2-J 6.3		LDN/UFN		Jun 11, 2022	1	New		No	In general, water hardness is higher in the deep monitoring wells compared to the shallow wells at sites with paired wells from nested pairs, with the exception of monitoring wells except for MW12-04D/S and MW12-05D/S. - What is different about these nested pairs that might why hardness trend is different from others?	Monitoring wells MW12-05D/S are located adjacent to a drainage and exhibit an upward hydraulic gradient, which suggests MW12-05S may be downgradient of the MW12-05D well. Monitoring wells MW12-04D/S are located near the deposit and each well may be influenced slightly differently by the geochemical conditions upgradient of the flow path of groundwater contributing to the well screens. Notwithstanding these considerations, the difference in hardness between the shallow and deep wells at these two sites is small as shown on Figure G1 of Appendix 2-J of the Application.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1195	Appendix 2-J 6.3		LDN/UFN		Jun 11, 2022	1	New		No	intermediate f lows paths with moderately long travel times. - this is the first mention of travel times. Are there calculations to corroborate this? If so, should be mentioned earlier in report, not just in summary	The reference to groundwater travel times was meant to be a relative one. However, estimated groundwater flow velocities across the Project are discussed in Section 4.3.5, from which travel times could be calculated.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing

1196	Appendix 2-J Appendix A Figure A1.1		LDN/UFN		Jun 11, 2022	1	New		No	this figure is very hard to look at. There is too much text to see what is going on. Maybe break it into 2 figures? 1 showing bedrock geology and another showing location of sample points?	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1197	Appendix 2-J Appendix A figures general		LDN/UFN		Jun 11, 2022	1	New		No	They are verrrryyy busy. I would recommend splitting them into multiple figures to show isolated info (ex: a figure for MW within channel deposits, one for MW within weathered BR, competent/fractured BR, etc...) It is too hard to differentiate when everything is in one giant figure and everything is labeled.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1198	Appendix 2-J general		LDN/UFN		Jun 11, 2022	1	New		No	** Hydraulic conductivity solutions should be included in appendix for reference.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB, 17-Jun	Ready for Publishing
1199	Appendix 2-M Table 3.1-1 p.6		LDN/UFN		Jun 11, 2022	1	New		No	WQ2 - was this verified suring subsequent field visits?	The site was not verified during subsequent field visits because there were no coordinates provided in Table 3.1-1 (Appendix 2-M, 2013 Baseline Report Water and Sediment Quality). A different consultant completed subsequent field visits; subsequent sampling locations were selected to establish baseline water quality at locations with the potential for Project-related effects (see Table 3.1-1 in Appendix 3-K, 2011 to 2020 Baseline Water Quality Report.	RT/TD to review	LDN/UFN	ERM		Tonia	AT/KP	Ready for Submission	RT; June 28	Ready for Publishing
1200	Appendix 2-H 3.3.2 pg.. 138		LDN/UFN		Jun 11, 2022	1	New		No	The samples that were taken for elemental content, are these the same samples that had mineralogical studies in section 3.3.1	The samples submitted for XRD and summarized in Table 3-41 of Section 3.3.1 represent a subset of the samples submitted for elemental content.	RT/TD to review	LDN/UFN	Lorax		Meghan	RT	Ready for Submission	GM; June 29	Ready for Publishing
1201	Appendix 2-H 3.3.5 pg.. 146		LDN/UFN		Jun 11, 2022	1	New		No	How were the 8 ore samples selected for SFE testing out of the 74 samples selected for ABA. Selection process is not explained. Are they representative of ore body?	These samples were selected as part of baseline geochemical characterization studies completed in 2013 and submitted with the EAC application. No additional rationale can be provided for sample selection beyond what is described in AMEC, 2014.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1202	Appendix 2-H Table 3-48		LDN/UFN		Jun 11, 2022	1	New		No	No units of measurement on this table	The units are assumed to be mg/kg/wk. This report was prepared for the EAC application and will not be reissued with updates.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB, 17-Jun	Ready for Publishing
1203	Appendix 2-H Figures 3-78 to 3-84		LDN/UFN		Jun 11, 2022	1	New		No	Y axis has 'acidity' on multiple graphs - assume this is an error and Y axis should just read '(mg/kg/wk)'?	This assumption is correct. This report was prepared for the EAC application and will not be reissued with updates.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB, 17-Jun	Ready for Publishing
1204	Appendix 2-H 3.4		LDN/UFN		Jun 11, 2022	1	New		No	Very little information on how samples were selected for the various tests reported in these sub-sections. Are these samples from bench trials?	These samples were selected as part of baseline geochemical characterization studies completed in 2013 and submitted with the EAC application. Sample selection would have been limited to contemporary metallurgical testwork. No additional rational can be provided for sample selection beyond what is described in AMEC, 2014.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1205	Appendix 2-H Figure 5-2 pg. 189		LDN/UFN		Jun 11, 2022	1	New		No	Will there be enough NAG 4and 5 material for construction (including TSF construction) and rehabilitation purposes, given that 74% of material is reactive and likely can't be used (i.e... PAG1, PAG2 and NAG3)	The design studies indicate that there is enough non-acid-generating (NAG) waste rock and overburden material for construction and site reclamation.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1205	Appendix 2-H Figure 5-2 pg. 189		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Can reference be made to these design studies or schedule be provided outlining number of tonnes of each geochemical classification?	An annual summary of the mine waste production schedule during operations, including overburden and NAG waste rock and PAG waste rock, is provided in Table 3.3-1 of Chapter 3 of the Application. The information presented includes the destination data for the Overburden (OVB) and non-acid generating (NAG) waste rock, and summarizes quantities planned to be delivered for staged construction of the tailings dam and other site features (e.g. haul roads) and the balance remaining to be delivered to the waste stockpiles. Additional details and summary information are also available in Section 8 of Appendix 3-C (Open Pit and Stockpile Design Report) and Section 3 of Appendix 3-K (TSF Life of Mine Design Report). The site reclamation prescriptions and soils material balance for closure and reclamation are summarized in Section 4.2 of Chapter 4 of the Application.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1206	Appendix 2-H 5 pg.. 197		LDN/UFN		Jun 11, 2022	1	New		No	Regarding operational confirmatory testing for NAG blocks - tests stated to be used are ABA and NAG test but would you also need to look at Zn content in case the material is NAG3?	This has been superseded by the ML/ARD Management Plan submitted as Appendix 9-D of the Application. The proposed ML/ARD monitoring program includes aqua regia digestible elemental scan. Using aqua regia digestible S (proxy for AP), Ca (proxy for NP), and Zn (metal leaching criteria), the environmental designation can be derived in the same manner as was done for the block model development. Aqua regia digestible elemental analysis with ICP-finish will be conducted at the onsite laboratory.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1207	Appendix 2-H 6.2.2 pg.. 201		LDN/UFN		Jun 11, 2022	1	New		No	How was the drainage proportioned between infiltration and runoff in the modelling?	The mine plan changed since the issuance of this report (AMEC, 2013). As such, all inputs for the water balance were re-evaluated and are presented in the LOM WB report (Section 2 of Appendix 5-B), which included the values of infiltration and runoff related to the LGO Stockpile.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
1207	Appendix 2-H 6.2.2 pg.. 201		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Section 2 of Appendix 5-B does not give the methodology but refers to the groundwater report - would be good to have it stated in this report if this report presents the methodology used to update the water balance model	The proportion of runoff and infiltration included in the water balance modelling conducted for the Application (Appendix 5-B) is summarized in Table 4.1 of Appendix 5-B. As indicated in footnote 1 to the table, runoff and infiltration values were estimated based on professional judgement considering the composition of the material placed in the facility, method of materials placement, and engineering design of the facility. The methodology to calculate the water available to runoff or infiltrate in the model is discussed in Section 2.2 of Appendix 5-B: Precipitation on a stockpile or storage facility is proportioned as either runoff or infiltration into the facility. Water that infiltrates into a facility is further separated into water held in storage or water released from storage as either seepage from the toe of the facility (toe discharge) or seepage to the underlying groundwater system. Calculations distributing water between runoff and infiltration into a facility use the same formula as for groundwater recharge to natural catchments described in Section 2 of the Baseline Watershed Model Report provided in KP (2021a). Each modelled stockpile facility was assigned parameter values to simulate the anticipated proportions of runoff, infiltration, and seepage to groundwater.		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1208	Appendix 2-H 6.3.1 pg.. 204		LDN/UFN		Jun 11, 2022	1	New		No	What was the reasoning of using a low grade HCT data for ore stockpile source term (which was also used for the LGO stockpile), why wasn't data from an ore HCT column used instead.	This section has been superseded by the Source Term report submitted with the Application (Appendix A.6 of the Water Balance and Water Quality Model Report, Appendix 5-D). Mill process water source terms were described in Section 4.1.5 of the Source Term report, while LGO source terms were described in Sections 3.2.2 and 4.3.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1209	Appendix 2-H 6.4 pg.. 208		LDN/UFN		Jun 11, 2022	1	New		No	With regards to West Dump progressively reclamation using overburden to reduce infiltration - are there lithologies in overburden that could be used to reduce infiltration and by how much?	More detailed work to characterize overburden types and properties will be completed during mine development. This work will assist in identifying materials that might be useful for use as cover materials intended to reduce infiltration into underlying mine rock.	RT/TD to review	LDN/UFN	BWG	KP		GM		TD, Jun 28	Ready for Publishing
1209	Appendix 2-H 6.4 pg.. 208		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide information on the details of the program and laboratory test work and what materials are likely required for the cover system	Please refer to Appendix D - Appendix D: Standard Operating Procedure – Overburden Monitoring of the Chapter 9-D MLARD Management Plan. This SOP outlines the sampling methodology, collection work instructions, QAQC processes, analytical processes and data analysis and reocrd keeping. Materials required for the cover system are laid out in Chapter 4 -Table 4.2-2 Reclamation Cover Depths and Material Types. Waste stockpiles will be covedred with a 50 cm cover of Surface soil – glaciofluvial parent material. Glaciofluvial surface soils will be used where reclamation is targeting dry, lichen-rich ecosystems that are high-quality habitat for caribou.		LDN/UFN	BWG	KP	Alastair/Klaus	RT		TD; Aug 11	Ready for Publishing
1210	Appendix 2-H 6.4.3 pg.. 211		LDN/UFN		Jun 11, 2022	1	New		No	What climate data was used to predict drainage.	The mine plan changed since the issuance of this report (AMEC, 2013). As such, all inputs for the water balance were re-evaluated and are now presented in the LOM WB report (Section 2 of Appendix 5-B), which included the climate data used in the model.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing

1211	Appendix 2-H 6.5.3 pg. 218		LDN/UFN		Jun 11, 2022	1	New		No	Model assumption with regards to load - were the types of material contributing to water quality proportionally assigned according to volumes comprising TSF infill?	This section has been superseded by the Water Balance and Water Quality Model Report submitted with the Application (Appendix 5-D).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1212	Appendix 2-H Table 6-13		LDN/UFN		Jun 11, 2022	1	New		No	If the material is assume to be exposed for 1 year prior to submergence in the TSF would you not expect to see higher sulfate values in the inistitial water from soluble sulfate minerals formed during by pyrite oxidation when the material was exposed?	This section has been superseded by the Source Term report submitted with the Application (Appendix A.6 of the Water Balance and Water Quality Model Report, Appendix 5-D).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1213	Appendix 2-H 6.5.2 pg.. 215		LDN/UFN		Jun 11, 2022	1	New		No	Were the source terms that were generated from HCT results taken at any particular time in the column cycle?	This section has been superseded by the Source Term report submitted with the Application (Appendix A.6 of the Water Balance and Water Quality Model Report, Appendix 5-D).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1214	Appendix 2-H 6.5.2 pg.. 215		LDN/UFN		Jun 11, 2022	1	New		No	How do the operation of these columns mimic the conditions modelled i.e.. material exposed for a year then submerged in a TSF - and the resulting water quality?	This section has been superseded by the Source Term report submitted with the Application (Appendix A.6 of the Water Balance and Water Quality Model Report, Appendix 5-D).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1215	Appendix 2-H 6.7.1 pg.. 235		LDN/UFN		Jun 11, 2022	1	New		No	Modelling is based on pit shell and volumes in 2014 - are there any significant changes between then and the current pit shell/volumes of material that would affect modelling outcomes?	This section has been superseded by the Source Term report submitted with the Application (Appendix A.6 of the Water Balance and Water Quality Model Report, Appendix 5-D).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1216	Appendix 2-H 6.9 pg.. 241		LDN/UFN		Jun 11, 2022	1	New		No	Would lining the TSF reduce the risk of groundwater contaminant plume?	The mine plan changed since the issuance of this report (AMEC, 2013), and the results of the groundwater and water quality predictions are no longer applicable. The mine waste management plan has been revised (Section 3.0 Appendix 3-K), the numerical groundwater model for the TSF has been updated (Appendix 5-F), and water quality predictions have been updated (Appendix 5-D.).	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 22	Ready for Publishing
1217	Appendix 2-H 6.9 pg. 241		LDN/UFN		Jun 11, 2022	1	New		No	What are the substrates underlying the TSF that would attenuate Cd and Zn. Reference to the report/study that was done on this attenuation?	Samples included weathered bedrock, basal till and sand and gravel units. This report (Metal sorption potential of natural substrates underlying the Blackwater Tailings Storage Facility: Implications for attenuation along seepage flowpaths; Lorax, 2013) is provided as Annex 15 of Appendix 2-H.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1218	Appendix 2-H 6.9 pg.. 241		LDN/UFN		Jun 11, 2022	1	New		No	Would the wetlands and passive treatment be sufficient enough to treat any expected seepages on closure from the TSF?	This is no longer the proposed mitigation strategy for the project. The current application includes active treatment (e.g., Membrane WTP).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1219	Appendix 2-H 7.2 pg.. 245		LDN/UFN		Jun 11, 2022	1	New		No	What is the design basis for the 30 cm (glacial till) cover thickness on the east and west WRD, is this expected to reduce infiltration?	The mine plan changed since the issuance of this report (AMEC, 2013), as such the closure concepts presented regarding a 30 cm cover for the East and West Waste Rock Dumps (WRDs) no longer apply, nor do values related to infiltration. The revised closure concept for the stockpiles can be found in Chapter 4 of the Application. Furthermore, assumptions about infiltration of the stockpiles following implementation of closure covers can be found in Appendix 5-B (the Life of Mine Water Balance Report). These two updated reports align with the current mine plan and closure concepts associated with that plan.	No	LDN/UFN	KP		Cindy/Greg	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1220	Appendix 2-H 7.4 pg.. 246		LDN/UFN		Jun 11, 2022	1	New		No	Neutralization to reduce metal loads - is there any concern regarding sulfate contents, or potential for sulfate plume below the TSF?	Source terms have been developed for seepages from the TSF C and TSF D ponds (Please see Appendix A.6 of Appendix 5-D for further details). These seepages were included in the Water Balance and Water Quality Model report (Appendix 5-D of the Application).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1220	Appendix 2-H 7.4 pg.. 246		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Question	No	Is there any concern regarding sulfate contents, or potential for sulfate plume below the TSF considering high values for source terms on closure (Tabel 4-8 Appendix A.6 in Appendix 5-d)	The water balance/water quality model incorporates seepage predictions (including predictions for sulfate), which are inherently reflected in the predicted water quality at downstream model nodes like WQ28 in Davidson Creek. Because the predicted sulfate concentrations at these downstream nodes in both the Base Case and several model sensitivities are below or equal to the BC long-term water quality guideline for sulfate in all project phases, including Closure, this parameter is not a significant concern with respect to potential adverse effects. This result is partly attributed to very long travel times predicted for seepages from the TSF		LDN/UFN	Lorax					GM; Aug 11	Ready for Publishing
1220	Appendix 2-H 7.4 pg.. 246		LDN/UFN (OKane_Lisa axelson)		Sep 01, 2022	3	Follow Up	Information request	No	Okane has not been provided with this document for review.	This comment is acknowledged. BW Gold provided "R1_ENV Comment ID 130 and 417" to LDN and UFN on September 8, 2022.		LDN/UFN	Lorax		Georges		Ready for Submission	GM; Sept 14	Ready for Publishing
1221	Chapter 2 2.4.1.1 pg.. 2-38		LDN/UFN		Jun 11, 2022	1	New		No	Same comment as 2H - how were samples selected for testing, was there adequate samples taken of each lithology/alteration or material classification (i.e... PAG1) type?	These samples were collected as part of the geochemical characterization program described in AMEC (2014). This report states that "the ABA testing program attempted to sample a broad range of lithologies, grade and locations within the pit." Further, it should be noted that the ARD block model, which is based on ABA and ICP assay results, ensures a highly representative estimate of ARD and ML potential across the deposit.	No	LDN/UFN	Lorax		John	GM	Ready for Submission	GM; June 28	Ready for Publishing
1221	Chapter 2 2.4.1.1 pg.. 2-38		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Question	No	Is the work documented looking at the how suitable ICP assay data is suitable for use in the block model (i.e.. correlation between ABA and ICP assay)	This documentation can be found in Appendix 2-H and the response to Ministry of Energy and Mines Comment 213 referenced below. '*AMEC (2016). Blackwater Gold Project – ML/ARD Geochemistry – Ministry of Energy and Mines Comment 213. Prepared by AMEC for New Gold Inc. 26 May 2016.*		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1222	Chapter 2 Table 2.4-4 pg.. 2-51		LDN/UFN		Jun 11, 2022	1	New		No	Classification scheme doesn't take into account low sulfur samples that may be classified as PAG due to low ANC - overly conservative	The comment is acknowledged. However, no updates to the waste rock classification will be undertaken at this time. The current strategy is considered more conservative than incorporating an additional cut-off based on sulfur content.	No	LDN/UFN	Lorax		John	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1222	Chapter 2 Table 2.4-4 pg.. 2-51		LDN/UFN (OKane_Kirstine Malloch; Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Understood. This was flagged as a potential issue around ensuring that there was enough suitable NAG for construction and rehabilitation purposes. Please provide material balances.	Please see response to follow-up comment 1061.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1223	Chapter 2 Table 2.4-5 and 2.4-6		LDN/UFN		Jun 11, 2022	1	New		No	Classification of material as PAG1 or PAF2 when sulfur is <0.1% over conservative	The comment is acknowledged. However, no updates to the waste rock classification will be undertaken at this time. The current strategy is considered more conservative than incorporating an additional cut-off based on sulfur content.	No	LDN/UFN	Lorax		John	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1223	Chapter 2 Table 2.4-5 and 2.4-6		LDN/UFN (OKane_Kirstine Malloch; Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Understood. This was flagged as a potential issue around ensuring that there was enough suitable NAG for construction and rehabilitation purposes. Please provide material balances.	Please see response to follow-up comment 1061.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1224	Appendix 2-I 2.2		LDN/UFN		Jun 11, 2022	1	New		No	Two different current meters were used, but no information was provided on calibration of the meters or how measurements might vary between the meters.	The current meters utilized for the hydrology field program come with factory calibrations and do not require periodic recalibration. The main model used for the field program is the Hach FH950, while the Marsh-McBirney Flo-Mate 2000 is used as a backup.	No	LDN/UFN	KP		Michael	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1225	Appendix 2-I 2.2		LDN/UFN		Jun 11, 2022	1	New		No	Four different current measurement techniques were used. Has there been any work done to compare the techniques when all used simultaneously to evaluate how the measurements differ?	Three different techniques were used to collect discharge measurements (current meter, dilution and Acoustic Doppler Current Profiler (ADCP)). Each method is best suited for different flow conditions and haven't been used concurrently at any stations on this project.	No	LDN/UFN	KP		Michael	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1226	Appendix 2-K Figure 4.1-17		LDN/UFN		Jun 11, 2022	1	New		No	Graph legend indicates short dash for detection limit, however this is missing from the graphs?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1227	Appendix 2-K Section 5		LDN/UFN		Jun 11, 2022	1	New		No	Were site specific metrics for water quality parameters looked at for closure predictions (i.e.. long term water quality)?	Section 5 of Appendix 2-K provides the surface water quality predictions for Constructions and Operations phases only. Water quality predictions for closure, along with model inputs, model set-up, background water quality and geochemical source terms are provided in Section 5.3 of Chapter 5 (Modeling, Mitigation and Discharges).	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 26	Ready for Publishing
1228	Appendix 2-L 1		LDN/UFN		Jun 11, 2022	1	New		No	Did quarterly sampling of groundwater wells allow for baseline seasonal variability to be fully understood	The frequency of the groundwater sampling program was sufficient to assess seasonal variability.	RT/TD to review	LDN/UFN	KP	BWG	Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1229	Appendix 2-L 2.2 pg8		LDN/UFN		Jun 11, 2022	1	New		No	Were enquiries made to the laboratory for reasons for elevated metals in the blank QAQC sample?	The report provided in Appendix 2-L is superseded with the information provided in the 2020 Baseline Groundwater Report in Appendix 2-J. Inquiries to detections in QA/QC samples were followed up with the lab.	No	LDN/UFN	KP	BWG	Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1230	Appendix 2-L 4		LDN/UFN		Jun 11, 2022	1	New		No	Has the QAQC program been improved since this report was issued	The report in Appendix 2-L is a data report for the initial sampling event. The report is superseded with the information provided in the 2020 Baseline Groundwater Report in Appendix 2-J. QA/QC of the groundwater baseline dataset is provided in Appendix E of Appendix 2-J.	No	LDN/UFN	KP	BWG	Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1231	Appendix 2-L 4		LDN/UFN		Jun 11, 2022	1	New		No	Has the methodology to purge wells been improved since this report was issued	The report provided in Appendix 2-L is superseded with the information provided in the 2020 Baseline Groundwater Report in Appendix 2-J. All monitoring wells are purged following a low flow methodology.	No	LDN/UFN	KP	BWG	Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1232	Appendix 2-J exe summ		LDN/UFN		Jun 11, 2022	1	New		No	Why is the weathered bedrock horizon in Davidson Creek valley have lower permeability compared to other areas where groundwater is expected to be conveyed primarily in the weathered bedrock horizon?	The report discusses a horizon of completely weathered bedrock, which is limited in extent to parts of the Davidson Creek valley, and a horizon of weathered bedrock, which exists across the majority of the site. The completely weathered bedrock horizon has a high percentage of fines and is expected to be a barrier to groundwater flow. The geometric mean of hydraulic conductivity tests completed in the unit is 2E-8 m/s. The weathered bedrock horizon is expected to be a permeable pathway given the higher degree of fracturing and the absence of clay infilling. The geometric mean hydraulic conductivity of the highly weathered bedrock based on response testing in monitoring wells and piezometers is 4E-7 m/s.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1233	Appendix 2-J 2.2		LDN/UFN		Jun 11, 2022	1	New		No	What was the reason for decommissioning of several of the hydrology stations?	Several of the hydrology stations were decommissioned to reflect changing project data needs, or moved due to challenging measurement conditions.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1234	Appendix 2-J Table 2.1		LDN/UFN		Jun 11, 2022	1	New		No	What is the definition of long-term from KP modelling of flow rates - is this during operations or post-closure?	Long-term average annual baseflows were calculated over the period of 1981 to 2020. It represents baseline data.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1235	Appendix 2-J 2.3 pg.. 11		LDN/UFN		Jun 11, 2022	1	New		No	What is the definition of long-term in terms of climate modelling?	Data collected from the Blackwater High and Low climate stations were used in conjunction with data from several regional stations with longer records to develop long-term Project-specific climate series, as discussed in Section 2 of Appendix 2-B. Historic data records as far back as 1980 were used to develop long-term historic climate series.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
1235	Appendix 2-J 2.3 pg.. 11		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please indicate in the report, or provide documentation of the update where "long-term" be defined in this report. It is a subective term.	There is no quantitative definition for "long-term". The World Meteorological Organization (WMO) defines "climate" as the average weather conditions over a period of time, ranging from months to thousands or millions of years. Of course, the term “long-term” is commonly used and typically understood to be taken in the context of which it is used. Environment Canada frequently presents average climate conditions as “Climate Normal” values, which are the average weather conditions over a consecutive 30-year period. Accordingly, any data period longer than 30 years might be considered long-term. In the context of climate assessments for mine sites in BC, the term “long-term” typically refers to the periods of record of the longest regionally applicable climate datasets. It is in this context that the term “long-term” is used in Appendix 2-B (the 2020 Hydrometeorology Report).		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1236	Appendix 2-J Figure 2.7		LDN/UFN		Jun 11, 2022	1	New		No	Does this figure indicate that there is thick permeable weathered bedrock beneath the footprint of TSF C and what are the implications for seepage from the dam	No, the completely weathered bedrock horizon is characterized as a low permeability layer that would restrict groundwater flow, as discussed in Section 4.3.1.1 of this report. The low permeability horizon is expected to limit the flow of seepage to deeper bedrock.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1237	Appendix 2-J 2.5.2.4 pg.. 19		LDN/UFN		Jun 11, 2022	1	New		No	Will the vertical fault below TSF D have implications for seepage from the dam	Based on the available information, faults in the Davidson Creek Valley are not believed to influence groundwater flow. Details of each fault zone intercepted during drilling is summarized in Table 2.2 of the Groundwater Baseline Report (Appendix 2-J). Drillhole circulation losses were not noted to have occurred within fault zones while drilling in the TSF area. Hydraulic conductivity test results completed in possible fault zones yielded results in the typical range of values observed for tests completed in bedrock; with the exception of one fault zone in GT13-20 which yielded an elevated hydraulic conductivity in a response test (2E-6 m/s) and packer test that may include the fault (9E-7 m/s).	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1237	Appendix 2-J 2.5.2.4 pg.. 19		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	As noted the fault GT 13-20 below TSF Dam D - does it have any implications for seepage from the dam into the groundwater given elevated hydraulic conductivities	The structure intercepted by the GT13-20 drillhole is an inferred fault and has only been encountered locally. The extent and orientation of the inferred fault are uncertain at this time and the feature is consequently not included in the structural model for the project (Figure A1.11 of Appendix 3-L). A standpipe piezometer installed in the fault zone at GT13-20 reports a water level that is only 5 mbgs; the relatively shallow water level suggests the screen is not installed in a permeable pathway. Even though a fault may consist of broken rock and exhibit permeability at the local scale it may not have hydraulic continuity along its length due to pinch out.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1238	Appendix 2-J Figure 2.8		LDN/UFN		Jun 11, 2022	1	New		No	Are the impacts of pit lake seepage on closure well understood considering pit is located in area of higher permeability?	The optimized water management strategy is to maintain the pit lake as a groundwater sink during Post-Closure, therefore seepage from the pit lake in Post-Closure is not expected (refer to response to Comment 126). Notwithstanding the plan to operate the pit lake as a groundwater sink, water level measurements collected during dewatering of the open pit will be used to refine the understanding of hydrogeology in the open pit area. The higher permeability bedrock zone in the deposit is located within the central portion of the deposit and will be mined out. It is therefore not relevant to seepage predictions during Closure or Post-Closure.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
1239	Appendix 2-J Figure 2.8		LDN/UFN		Jun 11, 2022	1	New		No	How much of this higher permeability area will remain on closure?	The higher permeability bedrock zone is located within the central portion of the deposit and it will be mined out by closure.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1240	Appendix 2-J Figure 2.12		LDN/UFN		Jun 11, 2022	1	New		No	What is the potential for seepage in the thicker glacial seeds downstream from the TSF?	The referenced figure is showing the extent of inferred glaciolacustrine deposits in the proposed TSF area. The glaciolacustrine deposits will restrict vertical groundwater flow, and the thicker ones even more so.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1241	Appendix 2-J 5.4.2.1		LDN/UFN		Jun 11, 2022	1	New		No	Do you think there is benefit to sampling the wells more than three times a year?	Yes, the sampling program was decreased for several years to three times per year to maintain continuous data collection. The sampling frequency of the wells was increased to a quarterly basis (4 times per year) in 2021.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1242	Appendix 2-J 5.2.4.2		LDN/UFN		Jun 11, 2022	1	New		No	List the total and dissolved metals analysed for and detection limits or refer to a table with this information in it	The total and dissolved metals analysed and associated method detection limits for the parameters are listed in Table F2.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1242	Appendix 2-J 5.2.4.2		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	Follow Up	Comment	No	Understood. There should be reference in the document to that Table or the total and dissolved metals should be listed in the text, there is no reference in the document itself.	BW Gold acknowledges this comment.		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
1243	Chapter 2 2.6.2.2 - Hydraulic Conductivity		LDN/UFN		Jun 11, 2022	1	New		No	ranges from <1 x 10-8 m/s to 6 x 10-3 m/s and the bedrock material ranges from <1 x 10-8 m/s to 2 x 10-5 m/s. - these are large ranges and suggests units should be sub-divided	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1244	CEMP	Use of Pesticide/ Herbicide	LDN/UFN		Jun 11, 2022	0			No	Table 8.6-1 of the CEMP includes ‘Comply with the StFN herbicide use policy in StFN territory. Nadleh First Nation has a strict no herbicide/pesticide policy for the territory. Recommendation: Please include reference to Nadleh First Nation’s herbicide/pesticide policy in Table 8.6-1.	The mitigation measure in Table 9.6-1 has been revised as follows: "Comply with the StFN and NWFN no herbicide/pesticide use policy within the respective territories"	No	LDN/UFN	N/A			0	N/A		
1244	CEMP	Use of Pesticide/ Herbicide	LDN/UFN		Jun 11, 2022	0			No	This reference/sentence is missing from the report.	The final CEMP refers the reader to the IPMP for details on control and eradication of invasive plants. Section 8.2.2.1 of the IPMP includes the following: "Comply with the StFN and NWFN Nation herbicide policy in their Traditional Territories"	No	LDN/UFN	N/A			0	N/A		

1244	CEMP	Use of Pesticide/ Herbicide	LDN/UFN		Jun 11, 2022	1	New		No	Table 9.6-1 is "Waste Rock Segregation Criteria" - update reference to 9.9-2	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 22	Ready for Publishing
1244	CEMP	Use of Pesticide/ Herbicide	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Table 9.9-2 of the Construction Environmental Management Plan (CEMP) will be revised to indicate that applicable to the Transmission Line "Comply with the Stellat'en First Nation and Nadleh Whut'en First Nation no herbicide/pesticide use policy within their Traditional Territories" and reference to Section 8.2.2.1 of the Invasive Plant Management Plan will be indicated for herbicide use "To protect fish and wildlife, riparian areas and wildlife habitat". BW Gold has not received the Stellat'en First Nation or Nadleh Whut'en First Nation herbicide policies and recently received the LDN herbicide use policy (August 2022). Therefore additional edits to the CEMP may be made to comply with each policy as they are received and/or updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1245	CEMP	Bats inaccurate information	LDN/UFN		Jun 11, 2022	0			No	You mention bat surveys will be conducted in 2021 can you update with the plans for bat work in 2022.	The following sentence has been added to Section 4.5.4 for consistency with version D.1 of the WMMP submit April 2022: " A follow-up monitoring program for little brown myotis and northern myotis will be implemented during construction, operations and closure to comply with DS Condition 8.22 and to address EAC Condition 23h (requirement of a subcomponent plan for bats) and recommendations from ECCC made on February 28, 2022."	No	LDN/UFN	ERM			RT	N/A		N/A
1245	CEMP	Bats inaccurate information	LDN/UFN		Jun 11, 2022	1	New		No	Update to comments received from ECCC likely required here.	BW Gold will revise the Construction Environmental Management Plan to address ECCC comments. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 22	Ready for Publishing
1245	CEMP	Bats inaccurate information	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	BW Gold commits to updating the plans/procedures as outlined in Round 1 responses.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1246	CEMP	Invasive species protocols	LDN/UFN		Jun 11, 2022	0			No	As invasive species are found throughout the province, it would be clearer if you just say 'All staff will follow vehicle and equipment cleaning procedures, after working in offsite areas areas (outside of regional study area) in accordance with IPMP Section 8.2.1. This would follow a better avoidance strategy.	The intent of the mitigation measure is to require equipment cleaning after work in areas with known invasive plants. The mitigation measure in General Measures/Equipment Use Mobile specifies that equipment should arrive on site clean and free of all material, debris and vegetation, or be cleaned in a designated location prior to unloading (IPMP, Section 8.2.1), and is the overall measure requiring equipment to arrive on site clean.	No	LDN/UFN	N/A			0	Ready for Submission	RT: June 24	Ready for Publishing
1246	CEMP	Invasive species protocols	LDN/UFN		Jun 11, 2022	1	New		No	Has this been removed from this section?	Table 9.9-3 (Invasive Plant Mitigation and Management Measures) was provided in the May 2022 submission of the Construction Environmental Management Plan. The two relevant mitigation/management measures applicable to Round 0 Comment #1246 are "Site Security will perform a visual inspection for cleanliness (free of excessive dirt and debris above and beyond that reasonably expected from transport to site) on all earth moving equipment and vehicles upon arrival to the mine site." and "After working in areas with known infestations, clean vehicles and equipment at the infested site or in an area where contamination and seed spread is unlikely, such as a mud-free, gravel, concrete, or other hard surface. If this is not possible, a regularly maintained area will be used for cleaning, such as the truck washing bay."	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1247	CEMP	Erosion and sediment control	LDN/UFN		Jun 11, 2022	0			No	Sample field fit technologies should be outlined so the degree of effort is provided, in lieu of the SEPCSP actually being provided	The SEPCSP will be provided as part of the construction contract documents.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1247	CEMP	Erosion and sediment control	LDN/UFN		Jun 11, 2022	1	New		No	Comment was unaddressed. For the meantime because the SEPCSP has not yet been provided, sample field fit technologies should be outlined in Section 9.2.	The Surface Erosion Prevention and Sediment Control Plan (SEPSCP) was provided in Appendix 9-A of the Application (submitted in April 2022), and was Attachment 16 of the Construction Environmental Management Plan submitted in May 2022 for review. The intent of the SEPSCP is to outline strategies and design objectives, with appropriate flexibility, to allow the ESC methods to be field-fit to suit the site conditions encountered. Site-specific erosion and sediment control plans and associated activities will be provided on the Issued for Construction (IFC) drawings.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1248	CEMP Section 9.4		LDN/UFN		Jun 11, 2022	0			No	Site-specific erosion and sediment control needs to be addressed, specific to the construction activities/locations proposed. Appendix 9C states "site-specific erosion and sediment control plans and associated activities will be provided on the IFC drawings which are not available at this time". Not included.	An updated Early Works ECSP was submitted to ENV Dec 1, 2021 to support EW's construction activities. Site-specific erosion and sediment control plans for major works will be developed and provided to contractors in the Issued For Construction drawing package that will be submitted to the Chief Inspector prior to construction.	No	LDN/UFN	N/A			0	Ready for Submission	RT: June 24	Ready for Publishing
1248	CEMP Section 9.4		LDN/UFN		Jun 11, 2022	0			No	Site specific erosion and sediment control plans should be developed prior to major works starting, and be provided with adequate time to review to MMO and First Nation groups.	BW Gold acknowledges the comment.	No	LDN/UFN	N/A			0	Ready for Submission	RT: June 24	Ready for Publishing
1248	CEMP Section 9.4		LDN/UFN		Jun 11, 2022	1	New		No	When does BW Gold intend to provide site specific erosion and sediment control plans?	BW Gold will provide site-specific erosion and sediment control plans along with the issued for construction drawings prior to construction.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing

1248	CEMP Section 9.4		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	We would like a commitment from BW stating that the Nations will continute to be consulted on throughout the development of these outstanding items.	BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement and as required by relevant regulatory processes.		LDN/UFN	BWG				Ready for Submission	CB; July 25	Ready for Publishing
1249	CEMP Section 4.5.4	Bats	LDN/UFN		Jun 11, 2022	1	New		No	Where pre-construction surveys identify the loss of little brown myotis and northern myotis roosting habitat, the loss will be offset through installation of new roosting structures (i.e.. bat boxes), within suitable habitat. Update this to clarify that bat boxes are not the preferred method, and Branden bark is being proposed.	BW Gold will revise Section 4.5.4 of the Construction Environmental Management Plan to list Branden bark as the preferred offset. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1249	CEMP Section 4.5.4	Bats	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1250	CEMP Section 9.6	MLARD	LDN/UFN		Jun 11, 2022	1	New		No	Has the Waste Rock and Ore Grade Control SOP been provided to reviewers? What procedures in this plan will prevent waste rock from being inadvertently re-directed to other construction sites?	Section 9.6 of the Construction Environmental Management Plan lists a number of Standard Operating Procedures (SOPs), included in the Metal Leaching / Acid Rock Drainage (ML/ARD) Management Plan (Appendix 9-D). The SOPs provide the standard procedures that will be completed to determine if material can be used in accordance with ML/ARD Management Plan, Figure 6.1-1: Flow Chart Illustrating the Decision Sequence and ML/ARD Management Strategies, which will be employed for waste rock and overburden. Excess NAG overburden, as well as NAG4 and NAG5 waste rock that is not used for construction purposes, will be deposited in waste stockpiles.	No	LDN/UFN	Lorax		Timo	GM	Ready for Submission	GM; June 21	Ready for Publishing
1251	CEMP Table 9.1-1	Mitigations	LDN/UFN		Jun 11, 2022	1	New		No	Prohibit use of hand-held cellular communication devices (i.e.., smartphones) while operating mobile equipment and light vehicles. Cellular devices should be prohibited in all vehicles and machinery.	This condition is primarily addressed through Health and Safety Requirements. Table 9.1-1 of the Construction Environmental Management Plan will be revised to indicate that cellular devices will be prohibited in all vehicles and machinery (while operational). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1251	CEMP Table 9.1-1	Mitigations	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1252	CEMP Section 9.6	MLARD	LDN/UFN		Jun 11, 2022	1	New		No	Waste rock classified as NAG3 will be used in construction of the TSF dams or otherwise stored in the TSF and submerged within five years of mining to reduce metal leaching If NAG3 needs to be submerged to reduce metal leaching why would it be used in construction of the TSF dams? Are there mitigations in place for metal leaching if this is the case?	The comment is acknowledged. However, no updates to the waste rock classification will be undertaken at this time. The current strategy is considered more conservative than incorporating an additional cut-off based on sulfur content.	RT/TD to review	LDN/UFN	Lorax		John	GM		GM; June 28	Ready for Publishing
1252	CEMP Section 9.6	MLARD	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	Clarify that NAG3 waste rock will only be used in portions of the TSF dam that can be submerged within 5 years.	NAG3 waste rock will be used to construct the internal zones of the TSF embankments (i.e., within the containment provided by the TSF) and surplus co-disposed of within the TSF in such a manner that the interstitial space is saturated within 3 to 5 years following placement.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1253	CEMP Section 9.6	MLARD	LDN/UFN		Jun 11, 2022	1	New		No	The volume of overburden requiring active management is expected to be minor and limited to zones near the bedrock contact in the vicinity of the ore deposit What are the procedures/locations for keeping overburden that does require active management? How will overburden that requires active management be differentiated by overburden that is benign when sorting? (I.e. What is considered the "vicinity" of the ore deposit where overburden will require active management?)	The comment is acknowledged. However, no updates to the waste rock classification will be undertaken at this time. The current strategy is considered more conservative than incorporating an additional cut-off based on sulfur content.	No	LDN/UFN	Lorax		John	GM		GM; June 28	Ready for Publishing
1253	CEMP Section 9.6	MLARD	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	The last response was copied and pasted from the response on comment ID 1252 and does not answer the original question. We are not necessarily asking for updates to the waste rock classification. What are the procedures/locations for keeping overburden that does require active management? How will overburden that requires active management be differentiated by overburden that is benign when sorting?	Overburden to be stripped will be sampled via test pitting and analyzed prior to excavation providing early insight into whether shallow horizons of the targeted area are PAG or NAG. The minor overburden quantities from deeper horizons near the bedrock contact will further be characterized prior to excavation utilizing grade control drilling since weathered bedrock previously defined as overburden may in fact report to ore. By conducting grade control drilling around the overburden-bedrock interface, the risk for PAG overburden misclassification and exposure in the waste stockpiles is largely eliminated. All other overburden, which is expected to be NAG, will be monitored as described in the ML/ARD Management Plan. The onsite laboratory will allow for rapid turnaround of geochemical test results and overburden classification allowing for flexible material handling.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1254	CEMP Section 9.6	MLARD	LDN/UFN		Jun 11, 2022	1	New		No	To prevent MLARD release from construction sites that contain waste rock fill, only NAG4 and NAG5 material will be used for unsaturated construction locations across the mine site Three paragraphs above this sentence states that NAG3 may be used in the construction of TSF dams - please clarify.	NAG3 waste rock will only be used in portions of the TSF dam that can be submerged within five years. NAG4 and NAG5 waste rock can be used for construction in areas that remain unsaturated.	No	LDN/UFN	Lorax		John	GM		GM; June 28	Ready for Publishing
1255	CEMP Section 9.7	Soil Management	LDN/UFN		Jun 11, 2022	1	New		No	The previous version of this plan mentioned a soil salvage SOP. Has/will this be developed?	There is no soil salvage standard operating procedure. Soil salvage procedures are detailed in the Soil Management Plan (Section 9.1 of Appendix 9-B).	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1256	CEMP Section 9.7.2	Soil Stockpile Procedures	LDN/UFN		Jun 11, 2022	1	New		No	Stockpiles will be located at least 10 m from any materials that could negatively impact the quality of the stored reclamation materials… Clarify if this is 10 m + upslope? Need to ensure runoff/seepage from other materials does not impact soil stockpiles.	BW Gold will revise the Construction Environmental Management Plan to indicate that stockpiles will be located a minimum 10 m upslope (or separated by a barrier) from any materials that could negatively impact the quality of the stored reclamation materials. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 24	Ready for Publishing
1256	CEMP Section 9.7.2	Soil Stockpile Procedures	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing

1257	CEMP Table 9.8-1	Air Quality Mitigations	LDN/UFN		Jun 11, 2022	1	New		No	Reduce speed limits on Project-owned roads if weather conditions cause fugitive dust emissions and dust cannot be controlled by watering. What will speed limits be reduced to? How will these changes to speed limits be communicated to traffic? How will the threshold for dusty weather conditions be applied/triggered?	Fugitive Dust Response Actions are identified in Table 5.1-1 of the Fugitive Dust Management Standard Operating Procedure (Appendix A of Appendix 9-O). Fugitive dust is determined by the size of a plume; a 'Large' plume (greater than the size of a haul truck) will trigger the speed limit restrictions if dust cannot be controlled by watering. The speed limit will be reduced to a speed that generates a small plume (less than half the size of a haul truck) or no plume (less than half the height of a haul truck tire). The Mine Manager will be responsible for communicating the speed limits to traffic.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1257	CEMP Table 9.8-1	Air Quality Mitigations	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	It seems like having a speed limit that changes based on the size of plume will be too difficult to upkeep and enforce. How will the Mine Manager communicate these changing speed limits effectively to everyone that will be travelling on roads?	The Mine Manager will be responsible for communicating the speed limits to traffic. As stated in the Fugitive Dust Management Standard Operating Procedure (Appendix D of the Air Quality and Fugitive Dust Management Plan), Supervisors (or designates) are responsible for the assessment of the plume size. The Supervisor will report to the Mine Manager the appropriate action level (i.e., if speed reductions are required when dust cannot be controlled by watering). The Mine Manager (or Supervisor) will communicate speed limit restrictions at the start of the shift or via radio. As stated in Table 9.8-1 of the Construction Environmental Management Plan: Speed limits are enforced by site security through periodic checks using a radar speed gun. Personnel caught speeding will be provided with constructive instruction on the importance of adhering to speed limits to limit dust generation. Repeat offenders may face disciplinary measures.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1258	CEMP Section 10.3	Spill Response Equipment	LDN/UFN		Jun 11, 2022	1	New		No	Any equipment or materials used during a spill will be replaced within 2 weeks following a spill. Two weeks seems like a long time for materials to be replaced? There should be extras on hand at camp so that they can be replenished and then more stock ordered for back-up - if another spill happens within this two week window there could be detrimental impacts.	BW Gold will revise the Construction Environmental Management Plan to indicate that replacements will be on hand and any spill response materials will be replaced within 48 hours, with back-up ordered within 2 weeks. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1258	CEMP Section 10.3	Spill Response Equipment	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1259	CEMP Section 15.6.1	Erosion and Sediment Control Monitoring	LDN/UFN		Jun 11, 2022	1	New		No	Monitoring will occur at minimum weekly during spring freshet and monthly outside of freshet… How is spring freshet measured? Is it a time frame or based on surrounding water levels?	Freshet is determined by water flows/levels and will be determined by a hydrologist (qualified professional) during the annual environmental monitoring (see Chapter 7).	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1260	CEMP Appendix 9-C Section 7	General	LDN/UFN		Jun 11, 2022	1	New		No	Update all plans with wetlands identified as part of further work (i.e., pre-construction surveys) proposed for Spring 2022.	Figures 7-1 and 7-2 of the Construction Environmental Monitoring Program will be revised to include the results of the 2022 wetland studies. All other relevant plans (i.e.., Vegetation Management Plan) will also be updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 24	Ready for Publishing
1260	CEMP Appendix 9-C Section 7	General	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1261	Chapter 5 Section 5.1	Stockpiles, Dumps & Spoils	LDN/UFN		Jun 11, 2022	0			No	"Waste rock not predicted to be non-acid generating (NAG) and not ML will be stored in the Upper and Lower Waste stockpiles." (emphasis added) This is confusing - I assume the intent is to refer to *waste rock not predicted...* Otherwise, storing PAG rock outside of the TSF is highly problematic from a water quality perspective. Furthermore, section 3.5.4.1 states that the waste stockpiles will only store NAG and OVB rock, in contradiction to the text quoted above.	The sentence has been updated in Section 5.1 to remove the word "not".	RT/TD to review	LDN/UFN	N/A			0	N/A		
1261	Chapter 5 Section 5.1	Stockpiles, Dumps & Spoils	LDN/UFN		Jun 11, 2022	1	New		No	Not entirely resolved. Confirm and re-word to be consistent with 3.5.4.1 stating that only NAG, non-ML and OVB rock will be stored in the upper and lower stockpiles.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1261	Chapter 5 Section 5.1	Stockpiles, Dumps & Spoils	LDN/UFN		Jul 22, 2022	2	Follow up	Information Requirement	No	Request a memo addressing this comment.	The statement provided in the summary Section 5.1 of Chapter 5 " Waste rock predicted to be non-acid generating (NAG) and not ML will be stored in the Upper and Lower Waste stockpiles." is consistent with the discussion in Section 3.5.4.1 (Chapter 3) indicating that both NAG, and non-metal leaching waste rock and overburden(OVB) will be stored in the two stockpiles (for example the follow text was provided in Section 3.5.4.1 "OVB and NAG waste rock from the Open Pit has been classified according their MPR NPR and metal		LDN/UFN	ERM	KP/MMTS	Tonia		Ready for Submission	RT; Aug. 10	Ready for Publishing
1261	Chapter 5 Section 5.1	Stockpiles, Dumps & Spoils	LDN/UFN		Sep 01, 2022	3	Follow up		No	Please include this significant edit in the updated ML/ARD Management plan (Chapter 9).	There is no required edit to the Metal Leaching and Acid Rock Drainage (ML/ARD) Management Plan (Appendix 9-D, March 2022). Section 6.2 of the M/LARD Management Plan states 'Excess NAG overburden as well as NAG4 and NAG5 waste rock that is not being used for construction purposes will be deposited in surface (i.e., unsaturated) stockpiles located north (Lower Waste stockpile) and west (Upper Waste stockpile) of the open pit.'		LDN/UFN	ERM	KP/MMTS	Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
1262	Chapter 5 Section 5.3.7.3	Water Use & Diversion	LDN/UFN		Jun 11, 2022	0			No	In general, the implications of gaps and uncertainties are not drawn out, making it difficult to assess the seriousness and potential impacts of these shortfalls.	The statements made are reasonable expressions of uncertainty relating to the water balance modelling completed for the application. The purpose of these statements within the water balance model summary was to highlight uncertainties in the modelling that may impact water management planning. These uncertainties informed the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E).	No	LDN/UFN	N/A			0	N/A		
1262	Chapter 5 Section 5.3.7.3	Water Use & Diversion	LDN/UFN		Jun 11, 2022	1	New		No	The statements of uncertainty may be unreasonable, however, the point of this concern was that the implications of this uncertainty was not communicated. The proponents should provide an account of the risks or implications of this uncertainty.	Thank you for the recommendation. It is not clear if the reviewer meant to say that the statements of uncertainty included in the report were unreasonable or whether this was a typo in the comment. However, we consider the statements to be reasonable expressions of uncertainty, and the implications from a water management planning perspective are discussed in the report. While the implications were not explicitly presented in a risk framework, they do provide an account of the risks associated with the uncertainty. The results of the water balance modelling results and uncertainty, and any updates thereto, will also inform further assessment of operational risks in the future. Consistent with good practice, operational risks should be periodically assessed throughout the life of the mine as the knowledge base changes and mine facilities evolve.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing

1263	Chapter 5 Section 5.4.9.10	Water Use & Diversion	LDN/UFN		Jun 11, 2022	0			Yes	"Main findings of the screening are as follows: no exceedances to short term guidelines (neither CCME nor BC WQG) or long-term BC WQG were returned; exceedances of CCME guidelines (long term) were limited to ammonia, fluoride and total Pb. In general, exceedances occurred every month of the Post-Closure phase; and factors of exceedance ranged from 1.7 (T-Pb; CCME-LT) to 4.5 (F; CCME-LT). In addition, total Ag concentrations were predicted to be equal to the long-term BC WQG in every month of the Post-Closure phase. ", William: The fact that exceedences are predicted to occur in every month of post-closure (i.e. in perpetuity) is highly concerning from an aquatic life perspective. Are there any further actions planned to reduce these impacts? How could/will these affect First Nations uses of the land and waters and what are their thoughts here?	BW Gold will further assess the potential impacts to the aquatic environment as a result of post-closure predictions in subsequent Environmental Management Act applications. At this time, BW Gold is seeking authorizations for discharges during the Construction and Operations phases. BW Gold will collect water quality and quantity monitoring data during mine operations, which will help inform closure and post-closure predictions and additional mitigation measures, as needed. BW Gold will be required to submit updates to the water plan every five years, which will include water quality model updates. Part 10, Section 10.1.12 of the Health, Safety and Reclamation Code of Mines in BC (EMLI 2021) requires that a TSF has a water balance and water management plan for the permitted life of the mine, prepared by a qualified person. After commencement of operations, the water balance and water management plans must be reconciled annually (Part 10, section 10.4.1). These updates may identify the need for science-based environmental benchmarks (SBEB). As required by EAC Condition 26, SBEBs must be developed in consultation with Aboriginal Groups. BW Gold must also develop a Closure and Post-Closure Water Quality Management Plan in accordance with EAC Condition 34. This plan must be developed in consultation with Indigenous Groups, EMLI and ENV, and submit the plan to EAO for review at the time of planned commencement of operations. The plan must be updated at least every five years from the commencement of operations. BW Gold has proposed additional closure research projects related to water treatment. These include use of constructed wetlands for treating water and pit lake amendments to improve water quality in the pit lake.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1263	Chapter 5 Section 5.4.9.10	Water Use & Diversion	LDN/UFN		Jun 11, 2022	1	New		No	Given the serious risks associated with these exceedances it seems inappropriate that the proponent should be allowed to proceed without accounting for those risks prior to the commencement of operations. The nations have serious concerns about the lack of consideration for the Closure Phase and would like to discuss.	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the Project receiving environment are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"	Yes	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1264	Chapter 5 Modelling, Mitigation, and Discharges Section 5.5.1	Conceptual Hydrogeologic Model	LDN/UFN		Jun 11, 2022	0			No	The mine plans for each phase of mine life (i.e., construction, operation, closure, and post closure). Construction phase not included in this section as required by guidance document.	A general arrangement for the Construction phase is provided as Figure C.1 in Appendix C of the Life of Mine Water Balance Model Report in Appendix 5-B.	No	LDN/UFN	N/A			0	N/A		
1264	Chapter 5 Modelling, Mitigation, and Discharges Section 5.5.1	Conceptual Hydrogeologic Model	LDN/UFN		Jun 11, 2022	0			No	Mine plans for each phase of mine life should be included in this section or at least referenced.	BW Gold acknowledges the comment. No change has been made to Appendix 5-B.	No	LDN/UFN	N/A			0			
1264	Chapter 5 Modelling, Mitigation, and Discharges Section 5.5.1	Conceptual Hydrogeologic Model	LDN/UFN		Jun 11, 2022	1	New		No	Unresolved - Mine plans for each phase of mine life should be included in this section or at least referenced.	Mine plans representing the End of Operations, Closure and Post-Closure phases of mine development are presented in Appendix B of the Numerical Groundwater Modelling Report (Appendix 5-F). Mine plans for Construction and earlier years of Operations (Years 8 and 18) are additionally presented in Appendix C of the Life of Mine Water Balance Model Report (Appendix 5-B).	No	LDN/UFN	KP			AT/KP	Ready for Submission	AT, June 15	Ready for Publishing
1265	Chapter 5 Modelling, Mitigation, and Discharges Section 5.6.4.4	Treatment Effectiveness	LDN/UFN		Jun 11, 2022	0		Comment	No	The application must provide sufficient information demonstrating the ability of the proposed [water treatment] technology to perform under the range of predicted site-specific conditions, over all phases of mine life, that it will be employed.	The reviewer's comment is acknowledged. However, BW Gold is of the view that the application meets the JAIR guidance, as the application is for approval for the construction and operations phases of the mine. That said, BW Gold will be working towards our EAC condition 33 as well as condition 34 on the timelines noted	No	LDN/UFN	Lorax			GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1265	Chapter 5 Modelling, Mitigation, and Discharges Section 5.6.4.4	Treatment Effectiveness	LDN/UFN		Jun 11, 2022	0		Comment	No	LDN/UFN support MMO's requests for more information on this topic and look forward to continuing discussions about water treatment in all phases of mine life.	BW Gold acknowledges this comment.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1265	Chapter 5 Modelling, Mitigation, and Discharges Section 5.6.4.4	Treatment Effectiveness	LDN/UFN		Jun 11, 2022	1	New	Comment	No	Discussion will need to continue through app review.	This comment is acknowledged. It is noted that the temporal scope of the Joint Mines Act / EMA permits application was agreed upon during IRT development to include the Construction and Operations phases. That said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM, 17-Jun	Ready for Publishing

1266	Chapter 5 Modelling, Mitigation, and Discharges Section 5.7	Domestic Water/Sewage Treatment	LDN/UFN		Jun 11, 2022	0		Comment	No	For sewage discharges greater than 100 persons, or where discharge is to surface waters, registration under the Municipal Wastewater Regulation (MWR) is desirable. No mention is made of compliance with the MWR. No mention is made of the amount of sewage flowing to the TSF as a proportion of the total discharge volume to the TSF, which impacts the need for MWR registration.	BW Gold has applied for a registration under the Municipal Wastewater Regulation for sewage discharge greater than 100 persons. The site wide water balance presented in Appendix 5-B includes effluent from the plant site sewage system (including the mill and truck shop) to TSF C Pond at a rate of 102 m3/d in Construction and Operations. Sewage effluent from the contractor laydown and explosives area is not sent to TSF C Pond in the water balance. Sewage from the contractor lay down and explosives is to ground, not to the camp system. Artemis is applying separately to Northern Health for this authorization. During Construction, the 102 m3/d sewage effluent comprises more than 10% of the effluent discharged to the TSF C Pond during all months except freshet months. Total combined effluent from all sources discharged to the TSF during Construction varies from 102 m3/d to 2,480 m3/d (calculated using monthly modelled flows). The total net effluent volume discharged to the TSF in the 18 months of Construction is 278,800 m3, of which 56,000 m3 is sewage effluent (20%). This is a temporary scenario during Construction only, with no discharge from TSF C to the environment proposed. During Operations, the plant site sewage effluent comprises 1% or less of the monthly effluent discharged to the TSF C Pond. Total combined effluent from all sources discharged to the TSF during Operations increases from 15,000 m3/d in Year 1 to 89,000 m3/d (calculated using monthly flows) at the end of active mining of the open pit. The total net effluent volume discharged to the TSF in Operations is 417 Mm3, of which 0.86 Mm3 is sewage effluent (0.2%).	No	LDN/UFN	N/A			0	N/A		N/A
1266	Chapter 5 Modelling, Mitigation, and Discharges Section 5.7	Domestic Water/Sewage Treatment	LDN/UFN		Jun 11, 2022	0		Comment	No	This response is noted. However, it must also be incorporated into the application itself.	The reviewer's comment is acknowledged, the requirement for registration under the MWR is identified in Chapter 1.	No	LDN/UFN	N/A			0	N/A		N/A
1266	Chapter 5 Modelling, Mitigation, and Discharges Section 5.7	Domestic Water/Sewage Treatment	LDN/UFN		Jun 11, 2022	1	New	Comment	No	Indicate where in chapter 1 this is identified	The requirement for registration under the MWR is identified in Chapter 1, Section 1.3.5: Ancillary Facilities.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 26	Ready for Publishing
1267	Chapter 5 5.1 p.5	Punctuation	LDN/UFN		Jun 11, 2022	1	New	Comment	No	The should be a comma between drilling and bulldozing in the second paragraph	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 20	Ready for Publishing
1268	Chapter 5 5.3.2.2 p.28		LDN/UFN		Jun 11, 2022	1	New		No	membrane WTP planned for construction only on an as needed basis, however its needed to treat TSF C pond surplus, upon realizing there's a surplus there will be enough time to construct and operate the membrane WTP?		No	LDN/UFN	BWG	KP/Lorax		GM			Ready for Publishing
1268	Chapter 5 5.3.2.2 p.28		LDN/UFN (OKane_Jill Ashbury)		Jul 22, 2022	2	follow up	Question	No	membrane WTP planned for construction only on an as needed basis, however its needed to treat TSF C pond surplus, upon realizing there's a surplus there will be enough time to construct and operate the membrane WTP?	The membrane WTP is part of the initial construction schedule (Chapter 3; Table 3.3-3 of the Application). It will remain available for use throughout the Operations phase (Chapter 3; Tables 3.3-4 to 3.3-7). Therefore, given it was constructed during the Construction phase, it is already operable prior to the commencement of the Operations phase so that is is available if/when surplus conditions in the TSF require its use.		LDN/UFN	BWG	KP/Lorax	Georges	GM		GM; Aug 16	Ready for Publishing
1269	Chapter 5 5.3.2.2 p.28		LDN/UFN		Jun 11, 2022	1	New		No	Please define HDPE somewhere in the document	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-June	Ready for Publishing
1270	Chapter 5 5.3.5.2 p.56	Clarity	LDN/UFN		Jun 11, 2022	1	New		No	3rd sentence formatting of percent decrease is unclear. Might read better as 11-16% and 43-45%	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	CB; 20 June	Ready for Publishing
1271	Chapter 5 5.3.8.2 p.91	Water Use & Diversion	LDN/UFN		Jun 11, 2022	1	New		No	If there are drier conditions and make-up water is required, where will the water be sourced from? Given the drier than average conditions could occur 15-25% of the time and that drier conditions are expected due to climate change this paragraph feels incomplete without mentioning where the additional water could come from.	Thank you for the suggestion. The water would be sourced from either on-site or off-site sources, depending on a variety of factors, including prevailing conditions at the mine site, actual water availability if dry conditions were to occur and the state of progressive development of mine site water management facilities. Additional consideration will be given to sourcing water in extreme dry conditions as part of regular operational planning.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1272	Chapter 5 5.4 p.93		LDN/UFN		Jun 11, 2022	1	New		No	Last sentence on page please define IDZ as its the first time the acronym is used in the document	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1273	Chapter 5 5.4.10.4	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	Remove space within parenthesis (not shown) in 2nd paragraph	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 20	Ready for Publishing
1274	Chapter 5 Table 5.5-2		LDN/UFN		Jun 11, 2022	1	New		No	Is the paragraph below this figure describing the figure? If not then the second sentence appears to be incomplete. If yes then a figure caption may be more appropriate.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1275	Chapter 5 Table 5.5-3 p.160		LDN/UFN		Jun 11, 2022	1	New		No	How were the effective porosities assumed? A sentence stating they were based on standards or theoretical values may be justified.	Effective porosity for bedrock and overburden materials were based on values presented by Dominico and Schwartz (1997). Effective porosity values for tailings, waste rock and embankment fill were based on professional judgement, but were checked against values presented in similar studies and values for similarly materials reported in literature.	No	LDN/UFN	KP			GM	Ready for Submission	KP, June 28	Ready for Publishing
1276	Chapter 5 5.6.5.6 p.224		LDN/UFN		Jun 11, 2022	1	New		No	States there are 2 operational risks, but there is a list of 5?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1277	Chapter 5 5.7.1 p.237		LDN/UFN		Jun 11, 2022	1	New		No	Please define MWR somewhere in the document	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1278	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Open Pit Predicted effects - reduction in the groundwater elevation due to pumping and depressurization is listed as a predicted effect. Confirm if this is only during operations	The pit lake will be maintained as a groundwater sink during Post-Closure. As a result, the water table will be drawn down around the perimeter of the open pit to the elevation of the pit lake in Post-Closure	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1279	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Open Pit Predicted effects - reduction in the groundwater elevation due to pumping and depressurization is listed as a predicted effect. What is the anticipated effect on groundwater in the closure/post-closure period when active depressurization has ceased?	The pit lake will be maintained as a groundwater sink during Post-Closure. As a result, the water table will be drawn down around the perimeter of the open pit in response to the elevation of the pit lake maintained in Post-Closure. Groundwater levels will initially recover when active depressurization ceases, but will ultimately stabilize at a relatively steady state condition based on the post-closure pit lake elevation.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing

1280	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	How long is complete stratification of the pit lake anticipated to take?	Stratification will develop within months of the start of pit filling. Specifically, the addition of brine to the pit bottom in combination with the input of less dense inflows to the pit lake surface will result in the rapid onset of water column stratification. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		Alan	GM		GM; June 28	Ready for Publishing
1281	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	At what elevation will the interface between the water cap and the denser water be?	The elevation of the interface between the lower brine layer and upper (less-dense) surface layer will migrate upwards over time as the pit fills. Specifically, the input of brine to the pit bottom will fill the pit from the bottom up, with the upper elevation of the brine layer migrating upwards over time. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		Alan	GM		GM; June 28	Ready for Publishing
1282	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Waste rock will be covered with tailings to reduce the hydraulic connection with the supernatant pond. How is the geochemical signature of the tailings material expected to vary from that of the waste rock?	Base Case loading rates for waste rock and tailings used in source term calculations were provided in Table 3-4 of the Source Term report (Appendix A.6 of the Water Balance and Water Quality Model Report, Appendix 5-D of the Application). In general, tailings loading rates were similar to or lower than PAG waste rock loading rates.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1283	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Waste rock will be covered with tailings to reduce the hydraulic connection with the supernatant pond. Is tailings anticipated to have either ML or ARD potential and, if so, to what extent?	Tailings are considered to be PAG with some metal leaching potential. Relevant information on tailings geochemistry is included in Chapter 2.4.1 of the Application, as well as summarized in Section 5.4 of the ML/ARD Management Plan (Appendix 9-D of the Application).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1284	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Treatment of tailings water is reportedly planned post-closure. How long is this anticipated to go for?	Treatment of tailings water is anticipated to occur through the Post-Closure phase.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 14	Ready for Publishing
1285	Chapter 5 Table 5.1-1		LDN/UFN		Jun 11, 2022	1	New		No	Changing the construction method for the LGO stockpile would reduce the amount of infiltration and runoff to be treated, and has the potential to remove the requirement for handling of the LGO material into the open pit or TSF in the case of a shutdown situation	The opportunity to leverage INAP "Building Better Mine Rock Stockpiles" was discussed with EMLI and First Nations on Thursday June 17th, 2022. Several mitigation measures were discussed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. With respect to lift height, BWG acknowledges the opportunity to lower the lift height to reduce ML/ARD, but also notes that there are both economic and physical limits that dictate the ultimate lift height selected. A review by BWG indicates dozing costs start to increase as the lift height is reduced below 5m and increase significantly below 3m. Further reduction in lift height is restricted by the physical characteristics of the run of mine rock. Lift heights of below 1m would be difficult to achieve, much less the 0.30m suggested in the meeting. These lift heights would also have significant cost implications and impact the economic viability of the stockpile. However, BWG will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BWG recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason BWG has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners to ensure capture and treatment of both surface run-off and stockpile seepage. Further, bonding for the stockpile will be provided for as part of BWG's RLCE.	No	LDN/UFN	BWG		Alastair	TD	Ready for Submission	AT, June 29	Ready for Publishing
1286	Chapter 5 Figure 5.3-3		LDN/UFN		Jun 11, 2022	1	New		No	There are a lot of active systems (i.e.., WTP) in post-closure. The water balance is only for 109 y after the start of processing, including operations (23 y), closure (25y). So only 50 y of post-closure is being monitored. Will these active systems be disengaged after approx. 50 years?	The Membrane WTP is assumed to continue operating in perpetuity.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1287	Chapter 5 5.3.2.4		LDN/UFN		Jun 11, 2022	1	New		No	The MWTP is still required to treat water from the ECD and Upper Waste Rock Stockpile. How long is the MWTP anticipated to run into post-closure?	Please refer to comment response #1286.	No	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1288	Chapter 5 5.3.2.4		LDN/UFN		Jun 11, 2022	1	New		No	no discharge is expected from the (open pit) discharge spillway in post-closure. Okay, so at what point can water in the open pit stop being actively managed and the pit allowed to overflow? Post-closure is typically considered a "hands off" portion of the project with only passive management for the majority of the period.	Active water management is anticipated at the BW Gold Mine project through the Post-Closure phase, including active water treatment and pit water level management. The pit is not designed to overflow at any point in the Project life.	No	LDN/UFN	BWG	KP		TD		TD, Jun 28	Ready for Publishing
1289	Chapter 5 5.3.2.4		LDN/UFN		Jun 11, 2022	1	New		No	In closure, both TSFs are reporting directly to Davidson Creek. Does the water quality model support the discharge water being of appropriate quality for the receiving environment?	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the receiving environment are no longer predicted to exceed BC WQGs. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"	No	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1290	Chapter 5 5.3.3.3 TSF Seepage		LDN/UFN		Jun 11, 2022	1	New		No	What is the anticipated quality of the seepage from the TSF in post-closure? Irrespective of the >100 y travel time, this has the potential to negatively impact receiving watersheds long after personnel has left site	The TSF seepage chemistry was summarized in Table 4-8 of the Source Term report (Appendix A.6 of the Water Balance and Water Quality Model report, Appendix 5-D of the Application).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1291	Chapter 5 5.3.3.3 TSF Supernatant Ponds		LDN/UFN		Jun 11, 2022	1	New		No	The rate of consolidation seems unreasonably fast given experience with similar sites. How was the rate of consolidation calculated? It is not located in Appendix 3-K.	A summary of the tailings consolidation modelling is presented in Appendix E3 of Appendix 3-K TSF Life of Mine Design Report.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing

1291	Chapter 5 5.3.3.3 TSF Supernatant Ponds		LDN/UFN (OKane_Marty Sangster)		Jul 22, 2022	2	Follow up	Information Requirement	No	Thank you for this response; however, it does not address the original comment / question"; re-phrasing: 1) As stated in the original question, the rate of consolidation is unusually fast for the depths of tailings deposited. Please provide documentation with respect to how these rates were calculated. 2) Full consolidation,especially in deep formations of material, generally requires 20 to 50 years and in some cases considerably longer. Please provide documentation as to how a thickness of tailings material placed at the planned solids content attains full consolidation in less than 10 years?	Appendix E3 of Appendix 3-K describes the tailings consolidation modelling for the TSF. The consolidation modelling was completed using a 1-dimensional finite strain consolidation modelling software called FS Consol. The software applies tailings material properties from the results of laboratory testing of the tailings (summarized in Appendix E1 of Appendix 3-K) to the geometry and filling schedule of the TSF (i.e., accounts for the Depth-Area-Capacity Curve of the TSF factoring in PAG Waste Rock Placement and the mine production schedule). Outputs of the model include average solids content of the deposited tailings (used to estimate the change in dry density of the tailings over time) and average pore pressure dissipation (used to demonstrate the degree of consolidation, 100% pore pressure dissipation being equivalent to full consolidation of the tailings). The model provides results on a monthly (30-day) time-step interval. As a conservative measure, the model assumed undrained base flow conditions (i.e., zero release of consolidation seepage, or bleed water, through the foundation or basin of the TSF). Separate model runs were completed for each of the layers indicated in Table E3.3 of Appendix E3 of Appendix 3-K (i.e., as separate columns within the TSF) to model the variability of the consolidation of the tailings in different points in the TSF where the thickness of tailings deposition is thinner or wider. The consolidation model for the TSF was completed using material parameters derived from laboratory testing of whole ore tailings, and represent average results for tailings deposited within the TSF. It is possible that as tailings are deposited and segregate into coarser (nearer the embankments) and finer (beneath the supernatant pond) fractions that consolidation rates may vary slightly from those represented in the model with the coarser tailings fraction consolidating faster than the model results indicate, and the finer tailings fraction consolidating slower than the model results indicate. The proponent acknowledges that there are facilities in which tailings consolidate at slower rates than as represented in the TSF C consolidation model, and also facilities in which tailings consolidate at faster rates. The rate of tailings consolidation is highly dependent on a number of factors, including: -Grind size of milled tailings -Initial (i.e., end of pipe) solids content of tailings delivered from the mill -Depth of water cover above the tailings (if tailings are maintained beneath a full water cover) -TSF geometry -TSF base flow conditions (i.e., low permeability liner versus the basin of full lined containment)		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1291	Chapter 5 5.3.3.3 TSF Supernatant Ponds		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow up	information requirement	No	Thank you for your response however it does not address the original question. Please provide documentation as to how a thickness of tailings material placed at the planned solids content attains full consolidation in less than 10 years when in comparable sites it requires 20-50 years?	"The methodology used to estimate the rate of consolidation is described in Appendix E-3 of Appendix 3-K. This documents how the estimate of time to achieve full consolidation was derived. As stated in the previous response, BW Gold acknowledges that some tailings storage facilities may take 20-50 years to achieve full consolidation, while conversely some other large facilities may take a matter of months to years to achieve this point. Modelling was completed based on whole ore tailings samples, and therefore represents an average time for tailings to reach full consolidation. Consolidation rates can be reassessed during early operations as observations related to the segregation behaviour of the finer and coarse fractions are made. Samples can be collected for additional testing to support further consolidation modelling efforts (acknowledging that the finer tailings fraction may consolidate at a slower rate than the whole ore tailings, while the coarser fraction may consolidate at a faster rate). Rate of consolidation and closure planning will be reassessed periodically throughout operations as observation and assessment of evolving field conditions is undertaken and additional data is collected."		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
1291	Chapter 5 5.3.3.3 TSF Supernatant Ponds		LDN/UFN (OKane_Mike O'Kane)		Oct 06, 2022	4	Follow up	information requirement	No	What management plan and/or which condition within the permit will the reassessment of tailings consolidation be documented?	As tailings consolidation modelling is a key aspect to the closure plan for the project, the anticipated rates of consolidation and implications for closure planning will be reviewed and updated, if appropriate, as part of the five-year update to the Reclamation and Closure Plan (RCP). Update of the RCP is required at least each five years per Section 10.4.1 of the Health, Safety and Reclamation Code of BC (the Code). The review will consider observational monitoring data collected during progressive TSF development and any additional laboratory testing/modelling completed in support of the staged TSF design.		LDN/UFN	KP		Greg	AT/KP	Ready for BWG Review	KP, Oct 27	Ready for Publishing
1291	Chapter 5 5.3.3.3 TSF Supernatant Ponds		LDN/UFN (OKane_Mike O'Kane)		Dec 01, 2022	5	Follow up		Yes	Based on the response, which is a commitment to review and update, if appropriate, consolidation and implications for closure as part of the 5-yr RCP, the concern that remains is whether information in respect of undertaking an update for the 5-yr RCP would actually exist. To address this, we recommend that a condition be included as part of permitting to develop field-based in situ monitoring programs to track consolidation, with spatial coverage that includes different tailings textures. The field-based program would be in addition to the commitments for laboratory testing of samples collected from the TSF, which Blackwater have previously committed to as part of responses to this comment in previous rounds. Examples of the sort of in situ monitoring would include, but should not be limited to: tracking volumes, mill through-put, in-situ pore-water pressure, and changes in density over time. Not just measured in the year or so prior to the need to update the 5-yr RCP, but for all years leading to that requirement.	The Health, Safety and Reclamaiton Code of BC (the Code; November 2022), Section 10.5.2 (1) & (2) states: 'An Operation, Maintenance and Surveillance Manual shall be prepared by one or more qualified person and submitted to the chief inspector prior to operation of the Tailings Storage Facility or dam.'; and, 'The Operation, Maintenance and Surveillance Manual shall be reviewed by the engineer of record and approved by the manager prior to implementation.' The TSF Life of Mine Design Report (Appendix 3-K) of the Application, includes a section on Monitoring and Operational requirements (Section 9.4). Within this section, Table 9.1 provides preliminary TSF Operational Surveillance Requirements, including some of those listed by the reviewer, and many others as well. The frequency of the recommended surveillance requirements is also included, listed as daily, weekly, monthly or annually. Given that the development of an OMS Manual is codified, Section 9.4 of Appendix 3-K provides a preliminary list of surveillance requirements that will be part of the OMS Manual, and that other items listed by the reviewer are those the mine collects as part of its normal operations (i.e. tracking volumes & mill throughput), BW Gold respectfully disagrees that a permit condition is needed to track these items identified by the reviewer.		LDN/UFN	KP		Dan	RT	Ready for Submission	RT; dec 8	Ready for Publishing
1292	Chapter 5 5.3.3.3 TSF Supernatant Ponds		LDN/UFN		Jun 11, 2022	1	New		No	What method was used for consolidation predictions? Reference in-text	The methodology for tailings consolidation modelling is presented in Appendix E3 of Appendix 3-K TSF Life of Mine Design Report.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
1293	Chapter 5 5.3.3.3 TSF Beaches		LDN/UFN		Jun 11, 2022	1	New		No	Per Chapter 4, the TSF beaches will be reclaimed... unless they aren't. Ensure that there is accommodation in text here that the beaches may NOT be reclaimed if they have the potential to fowl the MWTP in post-closure.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy/Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1294	Chapter 5 5.3.3.5 Upper Waste Stockpile		LDN/UFN		Jun 11, 2022	1	New		No	What about the geochemical signature of seepage from the Toe of the Upper Waste Stockpile requires it to be treated in the MWTP?	The source term chemistry assigned to the Upper Waste Stockpile toe seepage has sulphate and metal concentrations that are sufficiently elevated to require treatment. The source term is provided in Table 4-14 of the Source Term report (Appendix A.6 of the Water Balance and Water Quality Model report, Appendix 5-D of the Application).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1295	Chapter 5 5.3.3.8		LDN/UFN		Jun 11, 2022	1	New		No	How long is the MWTP anticipated to run in post-closure?	The Membrane WTP is assumed to continue operating in perpetuity.	No	LDN/UFN	Lorax			RT	Ready for Submission	GM; June 29	Ready for Publishing

1296	Chapter 5 Table 5.3-36		LDN/UFN		Jun 11, 2022	1	New		No	Water treatment at post-closure continues in perpetuity. This is unacceptable as a closure methodology, as it requires long-term liability on behalf of Artemis, and is difficult to bond because of the ambiguity of "perpetuity"	The Project received positive EA decisions, both federally and provincially in 2019, with active water treatment as part of the post-closure long term water management plan. LDN and UFN consented to issuance of the EA approvals. BW Gold has provided a closure cost estimate, which includes long-term water treatment, and has provided that cost estimate to LDN and UFN.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 14	Ready for Publishing
1297	Chapter 5 5.3.5.3		LDN/UFN		Jun 11, 2022	1	New		No	This section is incredibly long and difficult to navigate. Suggest 5th level of headers be implemented	The comment is appreciated. However, the application is not being reproduced.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 14	Ready for Publishing
1298	Chapter 5 5.3.5.3 Pit Lakes		LDN/UFN		Jun 11, 2022	1	New		No	The volume of the pit lake is anticipated to be actively managed in post-closure with pumping. How long is this anticipated to continue before the pit lake is allowed to spill?	The post-closure water management plan includes active control of the open pit water level for the long-term following closure.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1299	Chapter 5 5.3.7		LDN/UFN		Jun 11, 2022	1	New		No	There are four RCPs - 2.6, 4.5, 6.0, and 8.5. The numbering is not representative of severity, but rather the radiative forcing. It is unclear why this RCP was chosen, outside of "mid-range severity".	RCP 4.5 was chosen because it is viewed by many to be a mid-level RC Pathway in terms of predicted climate change severity and, therefore, it provides a reasonable mid-level estimate of possible conditions. There is a lot of debate in the literature about what RCP is most appropriate for modelling possible future conditions, but unfortunately there is no definitive answer because there are no probabilities associated with the RCPs. Thus, a reasonable risk-based approach cannot be applied.	No	LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
1299	Chapter 5 5.3.7		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Question	No	Thank you for your comment, however, the original question has not been adequately addressed: re-phrasing: Why was RCP4.5 chosen, and how does this compare to the new SSPs? Provide documentation which demonstrates RCP4.5 (and/or the related SSP) is the most applicable scenario for the site by history matching the modelled historical datasets from the various climate change projections with site-specific historical data. For example, what is the consequece effect on water quality mitigations in place if RCP 6.0 is representative? Or some other scenario?	For the comparison with SSPs, please see the response to R2, ITT#1053. For the comparison with historical trends, please see the response to R2, ITT#1054.		LDN/UFN	KP	Lorax	Jaime/Cindy	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1300	Chapter 5 5.3.7		LDN/UFN		Jun 11, 2022	1	New		No	What is the impact of increased precipitation on culturally significant species, such as White Bark Pine?	As stated in the RCP, precipitation may increase in the range of 5%-15% in each season (Wang et al. 2016). However, snowpacks may be less due to increased winter temperatures. The increase in precipitation may be offset, to some degree, by the expected increase in precipitation during the growing season. The potential effects on culturally significant plants, such as whitebark pine, are difficult to assess because of the interaction with site-specific factors (e.g., soil texture, depth, depth to impervious layers) and the ability of the plant species to adapt to changing precipitation. With regards to reclamation planning and planting prescriptions, updated climate modelling predictions and site level predictions will become more precise over time. This will allow for more refined ecohydrological modelling and a better understanding of potential climate change effects to plant species. Mine closure and reclamation planning will be informed by updated modelling and the results of reclamation trials, allowing for the adaptation to mine reclamation practices and planting prescriptions to address potential future climatic conditions. Wang T, A. Hamann, D. Spittlehouse, and C. Carroll. 2016. Locally Downscaled and Spatially Customizable Climate Data for Historical and Future Periods for North America. PLoS ONE 11(6): e0156720. https://doi.org/10.1371/journal.pone.0156720.	No	LDN/UFN	ERM		Ben	RT	Ready for Submission	RT; June 29	Ready for Publishing
1301	Chapter 5 5.3.7		LDN/UFN		Jun 11, 2022	1	New		No	Was the applicable GCM grid down-scaled to site-specific conditions in alignment with best practice?	Yes.	No	LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
1302	Chapter 5 5.3.7		LDN/UFN		Jun 11, 2022	1	New		No	GCM outputs are too coarse for site-specific investigations and numerical modelling. Either dynamic or statistical downscaling should be applied.	A statistical downscaled product from climateatlas.ca (PCIC downscale method) was used.	No	LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	AT, June 24	Ready for Publishing
1303	Chapter 5 5.3.7		LDN/UFN		Jun 11, 2022	1	New		No	How was the climate predicted after 2100?	The seasonal climate change values for 2021-2050, as presented in the hydromet report, were applied to the full period of record, which was then cycled through the watershed model.	No	LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	AT, June 24	Ready for Publishing

1304	Chapter 5 Table 5.3-13		LDN/UFN		Jun 11, 2022	1	New		No	Why was the projected change in mean climate only estimated to 2050, when active works in post-closure will continue well beyond that timeline?	There is little certainty beyond 2050 in climate projections. This report is not intended to be a definitive plan for work decades into the future, and future climate projections are expected to be continuously updated throughout the life of mine.	RT/TD to review	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
1304	Chapter 5 Table 5.3-13		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide documentation of climate change projections to 2100.	The Intergovernmental Panel on Climate Change (IPCC) Interactive Atlas presents projections to 2100. https://interactive-atlas.ipcc.ch/ As stated in the R1 response to ITT #1304, there is little certainty beyond 2050 in climate projections. This report is not intended to be a definitive plan for work decades into the future, and future climate projections are expected to be continuously updated throughout the life of mine.		LDN/UFN	KP		JGC/NR/CAS	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
1305	Chapter 5 5.3.7.2		LDN/UFN		Jun 11, 2022	1	New		No	Statistical downscaling of the GCM would allow for a more accurate time series to be developed for application to the LoM WBM	We disagree with this statement. The level of uncertainty from a downscaled GCM is too great to be of use for a LOM WBM.	No	LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	AT, June 24	Ready for Publishing
1306	Chapter 5 5.3.7.3		LDN/UFN		Jun 11, 2022	1	New		No	How does increased precipitation and flow due to climate change impact seepage and potential groundwater impacts from the TSFs?	Seepage from the TSF is largely controlled by the water level in the TSF, which will be maintained at the top of the waste rock in the facility.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1306	Chapter 5 5.3.7.3		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, not all aspects have been addressed; re-phrasing: Increasing precipitation and flows due to climate change can have an impact on the water table position (pore-water pressure regime) withing the TSF; how will the water table be maintained at the top of the waste rock in the facility? Please provide documentation with respect to how this is going to be managed into closure, and water quality monitoring plans. Recognizing that the water table is desried to be maintained above the waste rock within the facility in order to manage oxygen availability to the PAG rock, but giventhat the tailings on top of the waste rock is finer-textured, and the waste rock is placed 'behind' the dam walls, what mechanism (and site specific-control on that mechanism) would allow any appreciable level of oxygen to reach the PAG rock?	The Closure meeting held with LDN/UFN, EMLI and BW Gold on August 10, 2022 provided a good opportunity to clarify comments, discuss the closure concept for the TSF and develop next steps. BW Gold is encouraged to hear ideas brought forward by LDN/UFN + okane about further exploring the use of an engineered cover for the post-closure TSF. As discussed during the meeting, and presented in Chapter 4 of the Application, the closure concept for the TSF includes covering all PAG waste rock with PAG tailings, followed by applying a cover over the PAG tailings. TSF C will have a maximum elevation of PAG rock at 1305 masl (Appendix E2, Table E2.5 of Appendix 3-K). This is more than 45 m below the crest of the final Main Dam C. TSF D will have a maximum elevation of PAG rock at 1320 masl (Appendix E2, Table E2.6 of Appendix 3-K), which is more than 10 m below the crest of the final Main Dam D. With depths of waste rock below tailings that range from at least 5 metres (TSF D) and at least 40 m (TSF C), and with a TSF catchment that produces a surplus of water each year, maintaining a phreatic surface above the waste rock elevations is considered acheivable. Numerical groundwater modelling completed for Post-Closure suggests that the water table could be maintained near the top of the waste rock by meteoric recharge given predicted base case seepage rates from the facility (Section 4.3.1 of Appendix 5-F). The water balance for the project indicates there is sufficient water that can be directed to the TSF, either to the facility surface or the waste rock, to maintain waste rock saturation once the design and function of the engineered cover are further developed. BW Gold acknowledges that oxidation of the PAG waste rock under such a depth of tailings is unlikely		LDN/UFN	KP	Lorax	Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1307	Chapter 5 5.3.2.3		LDN/UFN		Jun 11, 2022	1	New		No	Provide explanation of water management in Pit Lake at closure. Summary reads as water is actively pumped from the pit lake so that the spillway is not active, is water expected to be pumped to the membrane WTP in perpetuity?	The post-closure water management plan includes active control of the open pit water level for the long-term following closure. This includes pumping water from the pit lake to the Membrane WTP.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1308	Chapter 5 5.3.3.5		LDN/UFN		Jun 11, 2022	1	New		No	Collection efficiency for channels near stockpiles are 85% and 90%, which seem reasonable. is the WB sensitive to changes in the collection efficiency, such as 70%?	Lower collection efficiencies for collection channels at the waste stockpiles would result in less water being directed to the Metals WTP. Conditions leading to lower rates of water treatment than represented in the base case were not assessed with the water balance model.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1308	Chapter 5 5.3.3.6		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	Follow up	Information Requirement	No	Clarification of earlier comment. Please document the sensitivity of the WB / WQ model to changes in collection efficiency, such as impact to receptors if less water is collected for treatment.	If the collection efficiency of the waste stockpile collection channels is lower than modelled in the base case water balance model, less water would be directed for treatment at the Metals WTP. Losses from the collection channels report to the WMP (primarily) and TSF C. The sensitivity of the predicted Metals WTP treatment rates and volumes of water directed to the WMP were assessed for a scenario assuming the collection channel efficiency for the Lower and Upper Waste Stockpiles decreases to 70% from modelled base case values (85 and 90%). Results of the sensitivity indicate the following changes to the water balance if collection channel efficiency is assumed to be 70%: •Up to 11,000 m3 less water is predicted to undergo treatment at the Metals WTP annually (0.5% decrease in annual treated volume). Of this water, 9,000 m3 more water is predicted to reach the WMP (<0.1% change in inflows to the pond) without undergoing metals treatment and the remaining 2,000 m3 contributes to TSF C. •Estimated volumes of water managed in the WMP are up to 2,000 m3/yr lower than the base case (<0.1% change) in Years 1 through 17 while the open pit is being advanced. The annual volume of water managed in the WMP increases by approximately 9,000 m3 compared to the base case once excavation of the open pit is complete and water in the collection channels that was previously directed to the WMP after metals treatment is now directed to the pit lake. Predicted concentrations in the WMP would be sensitive to this increased load originating from the from the waste stockpiles. However, potential impacts to downstream receptors from higher concentrations in the WMP would be mitigated by management actions prescribed in Application Appendix 9-E, Table 11-1. As noted in that table, management options exist for water in the WMP if is unsuitable for conveyance to the FWR for discharge, including re-routing water to TSF C or recycling WMP water to treatment. The WMP is monitored monthly as part of the mine site water management plan (Section 7.3.1 of Application Appendix 9-E).		LDN/UFN	KP	Lorax	Cindy	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
1309	Chapter 5 5.3.3.8		LDN/UFN		Jun 11, 2022	1	New		No	A Membrane WTP in post-closure treats water from the ECD, Upper Waste Stockpile, and Pit Lake for discharge to Davidson Creek. Given the 190 L/s rate and 25% brine flow, is there a limit in the capacity of the pit lake to receive brine water and maintain meromixis?	Yes, the pit has a finite capacity to receive brine while still maintaining meromixis. A fresher (lower salinity) cap on the order of 10-30 m in thickness will be required to maintain meromixis and prevent the mixing of brine waters into the lake surface. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		Alan	GM		GM; June 29	Ready for Publishing

1309	Chapter 5 5.3.3.9		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	Follow up	Information Requirement	Yes	It is understood from review of comments that additional pit lake modelling is being completed. Please document the design water levels for active management of the pit lake, spillway elevation and the associated storage capacities provided for pit lake water management in addition to the expectation of pit lake water quality evolution and development of meromixis.	For information on the target pit lake water level in Post-Closure and storage capacity of the open pit discussed in the KP (2022) letter "Blackwater Gold Project - Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization", which is appended in BW Gold Ltd. 2022. "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853". As described in Section 3.0 of KP (2022), the water management strategy during Post-Closure is to maintain the pit lake as a groundwater sink by maintaining the surface water elevation lower than the surrounding groundwater levels. Results of numerical modelling suggest the groundwater flow direction could be maintained inward toward the pit lake and seepage from the pit lake prevented if the lake level is maintained approximately 40 m below the pit rim (1,400 masl or lower). The volume-elevation relationship displaying the storage capacity for the open pit is illustrated on Figure 1 of KP (2022). The total storage capacity of the open pit is 216 Mm3. The pit lake water volume is 158 Mm3 when the lake elevation is 1,440 masl and there is more than 50 Mm3 storage available in the open pit above that lake level. There is no spillway outlet from the pit lake as it is not designed to overflow. The actual target level for the pit lake will be designed based on site specific factors and water management considerations as part of detailed Closure planning and will incorporate additional geological and hydrogeological data collected as the open pit is advanced and dewatered. Pit lake modelling results presented in the Application consider the pit as a fully mixed reservoir. Since that time, an interim two-cell pit lake model developed in GoldSim has been generated—the results of which are presented in a memorandum dated July 18, 2022 and discuss pit lake water quality over the modeled Post-Closure period. The reader is referred to this memo for further detail: Memo Subject: Two Cell Pit Lake Water Balance/Water Quality Model Update–Response to Round 1 Review Comments EMLI Geoscience 411, CSFN 844, and LDN/UFN 1280, 1281, 1309, 1344 to 1346, 1348, and 1624 File ID: R1_EMLI Geoscience 411, CSFN 844, LDNUFN 1280, 1281, 1309, 1344-1346, 1348, 1624_Two-cell pit lake WQM.pdf Subsequent to the above two-layer model, detailed pit lake modelling work is ongoing within PitMod, a 1-D hydrodynamic lake water quality model. The results of this detailed modelling will be provided by August 23, 2022, and presented detailed responses to the predicted pit lake water quality evolution and development of meromixis.		LDN/UFN	Lorax	KP	Alan	GM	Ready for Submission	GM; Aug 15	Ready for Publishing
1310	Chapter 5 5.3.3.8		LDN/UFN		Jun 11, 2022	1	New		No	Generally - what is the ability of each water treatment plant to scale up during upset conditions such as extreme rainfall events and avoid unplanned, emergency releases?	Assume "scale-up" means increased hydraulic capacity in this context. The water treatment plant does not have capacity above its design feed flow. However, during extreme weather events, dilution from rainfall (lower feed TDS) would allow the plant to operate at a higher recovery (higher water volume discharged). The immediate strategy for managing water associated with extreme weather events is to ensure that sufficient freeboard is maintained during operation to accommodate additional volumes from extreme weather.	No	LDN/UFN	BQE		V. Sundar	GM	Ready for Submission	GM; June 14	Ready for Publishing
1310	Chapter 5 5.3.3.8		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for the comment. Please provide documentation with respect to 1) What is considered sufficient freeboard and how was this determined?; 2) How will it be maintained during operations? ; and 3)How will it be maintained through closure? Please provide documentation as to the level of dilution referenced in the response.	The statement regarding dilution and water recovery was a qualitative statement based on membrane operation first principles. Any level of dilution will generally improve membrane operation and increase water recovery. It should be noted that in this case "dilution" refers to the addition of lower TDS water (rain) to the treatment plant feed sources with a net result of lower TDS feed water reporting to the treatment plant. It is not any active dilution that occurs in the water treatment plant. FilmTec is a membrane manufacturer and they have published a technical manual for the design of reverse osmosis systems (Form No. 45-D01504-en, Rev. 12 June 2022). Figure 9 and Table 1 in the technical manual describe the relationship between feed concentration and water recovery.		LDN/UFN	BQE		V. Sundar			GM; Aug 12	Ready for Publishing
1310	Chapter 5 5.3.3.8		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		No	I will ask the first question again - what is considered sufficient freeboard and how was this determined and how will it be maintained during operations?	The operational storage allowances and design freeboard for the TSF in the various stages of development are presented in the TSF Life of Mine Design Report (Appendix 3-K of the Application), including a summary of the freeboard requirements in Tables 5.2 and 6.2. The basis of how freeboard requirements were determined are presented in the corresponding sections of the report with additional details provided in Section 4.4 and the associated references therein. Design freeboard allowances and methods of determination for other water management structures are presented in the relevant design reports, including the Stockpiles Geotechnical and Water Management Design Report (Appendix 3-N), the Water Management Structures Detailed Design Report (Appendix 3-O), and the TSF Stage 1 Detailed Design Report (Appendix 3-J). Monitoring and instrumentation requirements to confirm freeboard availability are also summarized in these reports. Freeboard in the TSF will be maintained by following water management plans that include consideration for re-use of mine affected water for ore processing, fresh water diversion, mine water treatment and controlled release of surface water flows to Davidson Creek downstream of the mine to reduce the potential environmental impacts of the project. A summary of the TSF Water Balance is provided in Appendix G of Appendix 3-K with complete details presented in Appendix 5-B of the Application. The TSF, various water management structures and site water management plans are incorporated as appropriate into the Mine Site Water and Discharge Monitoring and Management Plan presented in Appendix 9-E of the Application.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	GM; Sept 13	Ready for Publishing
1311	Chapter 5 5.3.6.1		LDN/UFN		Jun 11, 2022	1	New		No	Please provide an estimation of unrecoverable seepage (%) from the TSFs based on the discussion of sensitivity seepage rates	Unrecoverable seepage from the TSF was estimated at between 2.5% and 5% of the total seepage during Post-Closure based on the results of the seepage analysis (base case and sensitivity simulations)	No	LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1312	Chapter 5 5.4.1.3		LDN/UFN		Jun 11, 2022	1	New		No	Table 5.4-1 Mitigation measures - water management strategy states brine from the Membrane WTP will be pumped to pit lake to support meromixis. Given the 25% brine rate, what is the capacity (years) for storing WTP brine, including the other sources of poor quality water that will be placed in the pit lake.	The post-closure water management plan includes active control of the open pit water level for the long-term following closure. Water inflows to the pit lake in Post-Closure, including contributions of brine, will generally be balanced by the rate that water is pumped out of the pit lake. The available storage volume above the target pit lake surface elevation is approximately 58 Mm3, which would take approximately 20 years to fill if the average inflows contributing annually to the pit are 2.8 Mm3, comprising brine, precipitation, runoff and groundwater inputs in Post-Closure.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1313	Chapter 5 5.5.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Tailings recharge rate post closure - 90 mm/yr. (~15% NP), is the model sensitive to this number, note that given materials indicated for cover systems, NP might be greater	An objective of assigning a recharge rate in the Mine Effects groundwater models was to simulate conditions with a water level at least at the top of the waste rock in the TSF (or above). Recharge rates were applied to the groundwater models that accomplished that objective and when the water level is at least at the top of the waste rock in the TSF, the simulated seepage rates are not very sensitive to recharge.	No	LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing

1313	Chapter 5 5.5.3.2		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	1) Provide documentation of sensitivity analyses done which indicate the model is not sensitive to recharge rate. 2) Provide documentation of sensitivity analyses done at greater NP as indicated in the original comment.	The base case recharge rate assigned to the tailings surface in the TSF is 90 mm/yr, which is equivalent to 15% of the average annual precipitation or 20-25% of the estimated net precipitation (approximately 230 mm/yr assuming a mature vegetated surface). The predicted base case Post-Closure total seepage rate is 65 L/s (Table 5.1 of Appendix 5-F). The sensitivity of the recharge rate assigned to the tailings beach on seepage predicted with the Post-Closure Model was evaluated to facilitate response to this comment. A sensitivity was conducted with the Post-Closure Model by increasing the recharge applied to the tailings material by 20% to 110 mm/yr (50% of net precipitation). Predicted seepage from the TSF increased by 1 L/s compared to the base case simulation. The water surface is predicted to be the same elevation in the waste rock as the base case. A second sensitivity was conducted by increasing the recharge 50% to 135 mm/yr (60% of net precipitation). Seepage from the TSF increased by 3 L/s compared base case simulation to 69 L/s. This predicted rate of total seepage from the TSF considering a 50% increase in the recharge rate to the tailings surface (69 L/s) is consistent with the modelled rate of total seepage from the TSF included in the base case Life of Mine Water Balance Model (Table 4.2 and Section 4.4.2 of Appendix 5-B) and which is the basis for water quality modelling.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
1314	Chapter 5 5.5.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Embankment Recharge Rate - 60 mm/yr. (~10% NP), Note the embankment fill is likely permeable, NP could be greater than this value.	BW Gold acknowledges this comment.	No	LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1314	Chapter 5 5.5.3.2		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide documentation with respect to how this recharge rate (and NP) were determined and whether or not it is consistent with the material.	The recharge rate assigned to the numerical groundwater model is lower than would be expected given the composition of the embankment (waste rock). Net precipitation that falls on the embankment and that will require management was assessed using the water balance model. The infiltration into the embankments was specified as 95% of net precipitation, which is equivalent to a recharge rate of 300 mm/yr. The recharge rate of 300 mm/yr assumes the majority of water falling on the embankment will infiltrate except for a small portion (5%) will runoff, most likely during snowmelt. The recharge rate of 300 mm/yr was used in the water balance and water quality modelling (Table 4.1 of Appendix 5-B).		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
1315	Chapter 5 5.5.4.2		LDN/UFN		Jun 11, 2022	1	New		No	What is the anticipated unrecoverable rate for TSF D? Not stated as clearly as for TSF C.	The predicted unrecoverable seepage rate for TSF D is 0.1 L/s (Table 5.5-5 in Chapter 5).	No	LDN/UFN	KP			GM	Ready for Submission	KP, June 30	Ready for Publishing
1316	Chapter 5 5.5.4.2		LDN/UFN		Jun 11, 2022	1	New		No	What is the assumed ksat of the 'lined' base of the LGO stockpile and how does the unrecoverable seepage rate change if the ksat is ranged by an order of magnitude?	The LGO design includes a low permeability liner and seepage collection system; however these were not explicitly included in the model. The LGO was modelled as an unlined facility in order to assess the potential pathways that seepage would follow from the stockpile footprint if seepage was to bypass the engineered liner and the seepage collection system.	No	LDN/UFN	KP			GM	Ready for Submission	KP, June 28	Ready for Publishing
1317	Chapter 5 5.4.1.1		LDN/UFN		Jun 11, 2022	1	New		No	Confirm the time period of monthly data that was looped for the Average Climate Case.	The Average Climate Case model includes mean monthly climate inputs averaged over the years of 1981 to 2020.	No	LDN/UFN	KP			GM	Ready for Submission	KP, June 28	Ready for Publishing
1318	Chapter 5 5.4.10.2		LDN/UFN		Jun 11, 2022	1	New		No	Guideline exceedances are predicted in Davidson Creek even with water treatment on-site into post-closure. Justification for these exceedances are required	This comment is acknowledged. It is noted that the temporal scope of the Joint Mines Act / EMA permits application was agreed upon during IRT development to include the Construction and Operations phases. That said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1319	Chapter 5 5.6.1		LDN/UFN		Jun 11, 2022	1	New		No	LGO runoff can be minimized through improved construction practices.	BW Gold acknowledges this comment and is open to further collaborative discussion on this topic for operational planning purposes.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1320	Chapter 5 5.6.1		LDN/UFN		Jun 11, 2022	1	New		No	Is 1.6L/s of unrecoverable seepage from tailings dams considered acceptable, considering the dams will remain in perpetuity?	Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. That model predicted exceedances of certain BC WQGs in the project receiving environment in the Closure and Post-Closure phases as a result of Project discharges. Since that time, BW Gold and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and Indigenous groups on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the Project receiving environment are no longer predicted to exceed BC WQGs. These results incorporate unrecoverable seepage from tailings dams. Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf"	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1320	Chapter 5 5.6.1		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	As we have not received the referenced reports and have not had the opportunity to review them, we cannot comment or resolve this comment. Carry forward to Round 3.	BWG acknowledges this comment. We have confirmed with the MMO that the referenced document in the Round 1 response was provided on June 30, 2022. It was provided again on August 12.		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
1321	Chapter 5 5.6.1		LDN/UFN		Jun 11, 2022	1	New		No	What is the quality of the seepage water and its impact on Davidson Creek?	Source term chemistries for TSF C and TSF D seepage are included in the source term report (Section 4.1.6 of Appendix A.6 of Appendix 5-D). These seepages have been integrated into the site water balance and water quality model (Appendix 5-D).	RT/TD to review	LDN/UFN	Lorax		Jen	GM	Ready for Submission	GM; June 24	Ready for Publishing
1322	Appendix 5-B Seepage sensitivity p.IV		LDN/UFN		Jun 11, 2022	1	New		No	Is there a seepage sensitivity analysis that includes the pitlake seepage/WBM for closure?	Water balance and water quality model results presented in the Application were computed in October 2021. Since that time, BW Gold and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. The updated water management strategy that reflects the optimized project in Closure/Post-Closure was presented to EMLI, ENV and Indigenous groups on June 15, 2022, and are summarized in the BW Gold document titled "Revised Base Case Closure and Post-Closure WQ Predictions", dated June 30, 2022 (BW Gold, 2022), and the Knight Piésold document titled "Blackwater Gold Project – Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization", dated June 30, 2022 (KP, 2022). The optimized water management strategy is to maintain the pit lake as a groundwater sink in Post-Closure. No seepage from the pit lake is therefore expected during the life of the mine.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1322	Appendix 5-B Seepage sensitivity p.IV		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	As we have not received the referenced reports and have not had the opportunity to review them, we cannot comment or resolve this comment. Carry forward to Round 3.	BWG acknowledges this comment. We have confirmed with the MMO that the referenced document in the Round 1 response was provided on June 30, 2022. It was provided again on August 12.		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing

1322	Appendix 5-B Seepage sensitivity p.IV		LDN/UFN (OKane_Lisa Axelson)		Aug 30, 2022	3	Follow Up	Information Requirement	Yes	Two sets of water balance / water quality (WB/WQ) pit lake modelling reports were reviewed as part of Round 3, as the reports were not made available prior to submittal of Round 2 comments. The original WB/WQ pit lake model stated that the pit lake will be filled in about 30 years and the WQ of the pit lake was modelled as single mixing cell. Several Round 1 and Round 2 comments are noted from other stakeholders requesting information in respect of the hydrodynamic condition and long filling time. Hence BW Gold provided an updated WB/WQ model. In the original modelling work, the conclusion is that water in the pit lake will not be suitable to discharge directly to the environment and a membrane water treatment plant (WTP) with appropriate capacity will be built to treat pit water before discharging during the post-closure period. The single cell mixing model is the most conservative situation, and this conservative approach led to the requirement for committments to a membrane WTP into perpetuity. In the updated WQ/WB model, BW Gold changed the pit filling strategy and the filling period decreased from 27 years to 13 years, with the intent being to limit pit wall weathering and runoff from the pit walls adversely influencing pit lake water quality. The new WQ model uses a 'two-cell' setup to represent a stratified lake condition. However, the depth/size , and hence volume, of the two cells were assumed, rather than modelled to understand development, onset, and maintenance of the stratification. Furthermore, no water exchange between two cells was considered. It is unclear why the model setup included the assumption of the stratification devleopment and depth/size/volume of the two cells, rather than extracting information from the hydrodynamic model results. It is postulated that this decision in respect to the assumption is because the hydrodynamic model has not been completed yet. It is common to model WQ with a two layer or three layer setup, but the	To ensure clarity in our response and discussions going forward, we highlight the following key water balance/water quality model (WB/WQM) iterations that have been presented by BW Gold to reviewers to date: 1. The WB/WQM (version 12b) presented in the March 2022 permit Application. This WB/WQM modelled the pit lake as a single mixing cell. 2. The updated WB/WQM (version 13e) dated June 29, 2022, and presented in Round 1 comment response "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf". A notable update in this model from v12b is the optimized Closure and Post-Closure water management to improve predicted water quality in Davidson creek during these phases. This optimization included an accelerated pit filling time This WB/WQM modelled the pit lake as a single mixing cell. 3. The WB/WQM (version 13e) sensitivity, dated July 18, 2022 and presented in the Round 1 attachment "R1_EMLI Geoscience 411, CSFN 844, LDNUFN 1280, 1281, 1309, 1344-1346, 1348, 1624.pdf". In this model, the pit lake is modelled as two distinct cells constructed in GoldSim modelling software. This model was generated as an interim step during the Review process as the more refined pit lake model (in PitMod software; item 4. below) was still under development at that time. 4. The WB/WQM (version 13e) sensitivity, dated August 23, 2022 and presented in the Round 2 attachment "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624.pdf". In this model, the pit lake is developed in PitMod software as a one-dimensional hydrodynamic model, representing a refinement from the GoldSim pit lake model described in item 3. above. BW Gold confirmed LDN/UFN had received this memo. The reviewer is correct in that the conclusion of the WQ modelling work to date remains the same as the original work presented in support of both the EA Certificate Application and permit Application, in that the membrane WTP is currently predicted to be needed into perpetuity in order to meet receiving environment goals. A key concern raised by reviewers during the present Application review relates to membrane WTP treatment during Post-Closure and the generation and storage of brine at the site. It is noted that BW Gold is		LDN/UFN	BWG		Ryan	RT	Ready for Submission	RT, Sept 20	Ready for Publishing
1322	Appendix 5-B Seepage sensitivity p.IV		LDN/UFN (OKane_Mike O'Kane)		Oct 06, 2022	4	Follow Up	Information Requirement	No	The WB/WQM (version 13e) sensitivity, dated August 23, 2022 and presented in the Round 2 attachment "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624.pdf". was not availabel to the reviewer at the time of Round 3 review comments. This memorandum has now been reviewed. The following review comments are made in respect of this memorandum: - The hydrodynamic modelling work reported in the August 23rd memorandum was completed after one cell and two cell Goldsim WQ modellin was completed. - According to the previous reports, these hydrodynamic model results should be used to verify the two cell model Goldsim WQ modelling results. - However the hydrodynamic model results were only compared to the one cell Goldsim WQ model in this report. - As anticipated, the one cell Goldsim model is more conservative, and the predicted surface concentration are higher than Hydrodynamic model predictions, except for the constituents from from surface inflows. - The original report made decisions with one cell Goldsim WQ model results and stated that a full-size membrane WTP will be needed and built up to manage the pit water. - It is apparanant that the new hydrodynamic model results do not offer any addititional change to the original decision made before in respect of the need for the WTP inperpetuity to treat pit lake water. - In this sense, the hydrodynamic model just proved the permanent stratified condition of the pit lake. The following summarizes the above: 1) Hydrodynamic model results were only compared with one-cell model results. - As expected the Pitmod model results will be lower than one cell Goldsim model except parameters from surface runoff (NO3). - There is a need to compare the 2 cell Goldsim results and understand the differences. 2) Please consider that the oxygen model results must be re-visited to confirm they are representative of anticipated conditions (Figure4-4). - What is the BOD of brine water and sediment oxygen demand (SOD)? - Groundwater inflow should have very low DO and SOD should continuously consume the DO in the water column so the DO	Please see attachment "R4_LDN UFN Comment ID 1322.pdf"		LDN/UFN	Lorax	BWG	Georges		21-Nov-22	GM; Nov 22	Ready for Publishing

1322	Appendix 5-B Seepage sensitivity p.IV		LDN/UFN (OKane_Mike O'Kane)		Dec 01, 2022	5	Follow Up		Yes	1) Thank you for the detailed response and additional modelling effort and results; it is much appreciated. While there remains some improvements that could be applied to the water quality model to improve predictions which are evident in the latest modelling results (see part 2 this comment), the additional modelling and discussion highlights the broader question surrounding use of the model for planning end pit lake performance. In contrast to the risk management approach for other structures, such as the TSF, in which end-land use guides design development and research, the end pit lake management plan does not consider a defined end land use or timeframe to achieve such; rather, there is a plan for managing water quality, and a commitment to ensure the pit lake is a groundwater sink if this facet of the site wide and pit lake water balance becomes an issue in closure. Appreciating that mitigations are considered and costed to account for uncertainties in modelling and expected water quality, we recommended that an appropriate approach to planning and application of the water quality model would be to incorporate an end-land use vision for the pit lake, and a timeframe to achieve this land use, which could include different time frames, within the broad time frame, that are inherent to the evolution of the pit lake. It is anticipated that this would lead to development of the water quality model to include additional water quality mitigation strategies, such as bioremediation, necessary to achieve the end land use goal in the specified time frame, and guide research programs and objectives during project development and operations that optimize the plan to achieve the pit lake end land use. 2) The following summarizes our observations regarding comparison of the water quality models and improvement for predictions of DO: i) Comparison of the hydrodynamic model vs. goldsim model predictions (table 3.1) indicates that surface concentration of major ions (indicator of TDS) decreased about 40% when compared with the two cell model results. Predicted concentration of metals are generally lower for the hydrodynamic model than the Goldsim models. Concentrations of some metals (e.g., Cr, Mn, Tl) predicted by the hydrodynamic model decreased from above guideline, as for the GoldSim models, to less than guideline levels. Therefore, the assumptions made in the two-cell goldsim model did not correctly represent the hydrodynamic condition of the pit	Part 1: Ongoing monitoring and research programs, including the long-term brine management work plan, may result in updates to the water quality model. Potential updates will be considered as a component of the Five Year Plan water quality model update. BW Gold will be required to submit updates to the water quality model and reclamation program every five years. Part 2, i: The comment is acknowledged. The two-cell pit lake model was not intended to represent a hydrodynamic model. The two-cell model includes two separate cells within the pit lake with no mixing between the cells. Part 2, ii: The brine volume is calculated within the water balance which was used in both the hydrodynamic and the two-cell pit lake models. As such, no changes to the brine volume in the hydrodynamic model are warranted. Part 2, iii: While there is some uncertainty with regards to the sources and magnitude of BOD associated with brine, the exclusion of brine-derived BOD from oxygen consumption modelling is not considered to represent a material change to our interpretation of the system. As outlined in a previous response, the greatest degree of uncertainty will relate to the timing and spatial extent of suboxia that develops at intermediate depths. Within the brine layer in the pit bottom, aerobic conditions are predicted during the period of brine discharge to the lake given the fully oxygenated nature of the brine. In this regard, the BOD of the brine may be an insignificant factor as it relates to oxygen distribution. Overall, given the numerous uncertainties relating to the oxygen consumption modelling (e.g., magnitude of lake primary production, rates of bacterially-mediated organic matter degradation, location of organic matter degradation (water column vs. lake bottom)), no further modelling is proposed at this time.		LDN/UFN	Lorax					TD, Dec 8	Ready for Publishing
1323	Appendix 5-B 4.6.1		LDN/UFN		Jun 11, 2022	1	New		No	Does the discharge from the Lower waste stock pile have to go to the Metals WTP during Operations? If its 98-100% Overburden why would it need to be treated via Metals WTP?	The source terms applied to stockpile runoff and infiltration at maximum buildout are included in Table 4-14 of the Source Term Report (Appendix A.6 of the Water Balance and Water Quality Model report, Appendix 5-D of the Application). The Base Case concentrations for the Lower Waste Stockpile are generally below BC aquatic life guidelines. As such, treatment of the Lower Waste Stockpile collection pond water may not be required. The water quality of the Lower Waste Stockpile collection pond will be monitored as per the requirements in the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application). If the water quality concentrations meet the BC aquatic life water quality guidelines, this water is proposed to bypass treatment at the Metals WTP and be discharged directly to the WMP.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1324	Appendix 5-B 2.4		LDN/UFN		Jun 11, 2022	1	New		No	If the membrane water treatment plant remains in perpetuity, why is the LOM WBM only run for 109 years after mineral processing begins?	The model includes a 17 year baseline period before mine operations begins. The LOM WBM duration was built out so that the 40-year historic climate record would fit into the model three times (120 years) plus have a few initial years (6 years) for the model to spin up. It was a reasonable decision to extend the model for this timeframe at this point in the project development. Longer timeframes could be considered for further revisions of the model following calibration with measured data.	No	LDN/UFN	KP		Cindy/Greg	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1325	Appendix 5-B Figure 2.2		LDN/UFN		Jun 11, 2022	1	New		No	Add sub-catchment labels to legend.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1326	Appendix 5-B 2.3		LDN/UFN		Jun 11, 2022	1	New		No	Confirm orographic effects scaling factor. In hydromet report I believe a 4% scaling factor was used.	An orographic factor of 1.05 (5% increase per 100 meters) was applied to the calibrated Baseline Watershed Model in winter months (November to March) and a factor of 1.04 was applied to non-winter months. These orographic factors are consistent with the reported difference in measured precipitation between the Blackwater High and Blackwater Low climate stations as discussed in the Hydrometeorology report in Appendix 2-B.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1327	Appendix 5-B 3.2.1		LDN/UFN		Jun 11, 2022	1	New		No	PAG1 and PAG2 potentially acid generating waste rock - I don't think we need to say potentially acid generating again	Thank you for the recommendation. We will consider these comments and stated preferences in the future. However, no changes are being made to the way the information has been presented.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1328	Appendix 5-B 4.2		LDN/UFN		Jun 11, 2022	1	New		No	was evapotranspiration due to vegetation in post-closure modelled or is this just an assumption?	Evapotranspiration was included in the water balance in Post-Closure and effectively reduced the net precipitation on facilities once a vegetated cover was assumed to be in place. The modelled evapotranspiration rate in Post-Closure was assumed to be consistent with the evapotranspiration rate assigned to the sub-catchment during baseline conditions in the calibrated baseline watershed model. Calculation of the evapotranspiration rate in the baseline period is discussed in Section 2.4.4 of the Baseline Watershed Model presented in Appendix A of Appendix 5-B of the Application.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1328	Appendix 5-B 4.2		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	There is no section 2.4.4 in Appendix A of Appendix 5-B. Please provide correct reference.	The Baseline Watershed Model report in Appendix A of Appendix 5-B does provide the requested information describing how evaporation is modelled in Section 2.4.4 (as indicated in the Round 1 response).		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1329	Appendix 5-B table 4.2		LDN/UFN		Jun 11, 2022	1	New		No	Why was diffusion and dispersion not included? Constituents of concern aren't conservative	Modelling results were assessed for the center of mass of the potential seepage, therefore dispersion and diffusion were not considered.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1330	Appendix 5-B 4.8.6		LDN/UFN		Jun 11, 2022	1	New		No	and released in a controlled way to Davidson Creek in Construction through Closure. Define controlled way	"In a controlled way" implies that water will be released from the Fresh Water Reservoir at rates that meet minimum instream flows needs (IFN) in Davidson Creek.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1330	Appendix 5-B 4.8.6		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	provide documentation outlining this, and specify the minimum IFN.	Please refer to Section 3 and the associated design drawings in Appendix D of Appendix 3-O (Water Management Structures Detailed Design Report) of the Application for the Fresh Water Reservoir outlet works design basis (including the instream flow needs) and details of how flows will be discharged from the reservoir. The minimum IFN is also provided in Table 4.8 in Section 4.8.5 in Appendix 5-B of the Application.		LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1331	Appendix 5-B 4.8.7.2		LDN/UFN		Jun 11, 2022	1	New		No	along with 50% of the groundwater discharge in the 11-DC sub-catchment. - justification for 50%?	Approximately half of the 11-DC catchment is diverted to Creek 705. The 50% estimate is commensurate with the area diverted.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1332	Appendix 5-B 4.9		LDN/UFN		Jun 11, 2022	1	New		No	"A metals treatment pond upstream of the Metals WTP will temporarily collect and store water from all the sources them before treatment." fix this sentence	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1333	Appendix 5-B table 6.1		LDN/UFN		Jun 11, 2022	1	New		No	Why is H2B post closure in red? Add a note.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1334	Appendix 5-B 6.2.2		LDN/UFN		Jun 11, 2022	1	New		No	a few litres per second - define a few.	As indicated in Table E3.3 for H11 during the Construction period, predicted average monthly flows are predicted to vary between 0 to 3 L/s over the year.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1335	Appendix 5-B ES		LDN/UFN		Jun 11, 2022	1	New		No	What is the impact in the immediate term to the flows downstream of the mine being reduced up to 45% of baseline flow?	During project construction and early operations (i.e.., prior to pumping from Tatelkuz Lake), Davidson Creek water flows downstream of the Project are predicted to be reduced by 11% to 16% respectively (Table E3.2 of Appendix D Water Management Report). During this period, BW Gold has proposed temporary IFN levels (Blackwater Fisheries Offsetting Plan Construction Phase: Temporary Minimum Flow Threshold in Davidson Creek), during which time fish habitat monitoring and adaptive management will be used to prevent significant adverse effects to fish or fish habitat by releasing diverted and dammed non or treated contact water from retainment structures being constructed (e.g., FWR). During the remaining Project phases when flow rates in Davidson Creek are predicted to be reduced by 43% to 45%, flows will be supplemented by water from the FWSS during Operations through to the end of Closure to meet IFN, as per CEAA Decision Statement Condition 3.8 that requires the IFN be met. Residual losses of fish habitat due to flow change are accounted for in the Project's Fisheries Act Authorization Application (Palmer, May 2022).	RT/TD to review	LDN/UFN	Palmer		Glenn	TD	Ready for Submission	TD, Jun 27	Ready for Publishing
1336	Appendix 5-B ES		LDN/UFN		Jun 11, 2022	1	New		No	Treatment and release of water from the supernatant pond might be required under above average climate conditions. What is the modelled case for 'above average', a year with higher cumulative precipitation or a extreme event?	Under average climate inputs to the water balance model, operational treatment of the supernant pond was not required to mantain the pond volume within the TSF within the target range. The predictions that water treatment could be required during wetter than average conditions were developed using the Variable Climate Case (VCC) Model. The VCC Model uses the 40-year historic climate record input to the model to generate a series of flows and pond volumes. The refernce to "wetter than average" conditions is implying that the model developed with the variable historic climate required water treatment to mantain the TSF pond within the target range (during wetter periods), whereas the model developed with average climate inputs did not require treatment.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1337	Appendix 5-B ES		LDN/UFN		Jun 11, 2022	1	New		No	Please comment on the appropriateness of the assumed RCP4.5 pathway for climate change, is it still considered appropriate after the release of the most recent IPCC studies?	Yes, it is still appropriate. The publication of the most recent IPCC studies does not refute the claim that RCP 4.5 is a mid-level RCP pathway. See the response to comment 1299.	No	LDN/UFN	KP		Cindy/Jaime	AT/KP	Ready for Submission	AT, June 24	Ready for Publishing
1337	Appendix 5-B ES		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please document the evaluation of the RCP4.5 pathway and its appropriateness for use given the release of the recent IPCC studies	For the appropriateness of RCP4.5, please see the response to R2, ITT#1054.		LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1337	Appendix 5-B ES		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	Follow up	Information Requirement	No	Please define 'mid-level'. Does 'mid-level' represent current patterns at site, if any, in respect to climate change trends / indicators? Mid-level in respect of….? For example, in respect of the input climate data, and the probability of this occuring on site, or perhaps in respect of the consequence effect of water quality or volumes that output from the model? Why is mid-level appropriate?	The release of the recent Intergovernmental Panel on Climate Change (IPCC) studies does not change our opinion that RCP 4.5 represents an appropriate scenario for assessing possible future climate conditions for the project site, as discussed in the response to R2, ITT #1054. A mid-level condition is typically taken to represent a condition that is not particularly high-level or particularly low-level, but rather something in between. The IPCC studies describe RCP 4.5 as one of two "intermediate scenarios" of GHG emissions and atmospheric concentrations (SPM.2.1. Key drivers of future climate, https://ar5-syr.ipcc.ch/topic_summary.php).		LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1337	Appendix 5-B ES		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up	question	No	We are not asking you to change your opinion that RCP4.5 is the appropriate selection. We are asking you to justify how you determined RCP4.5 is the best option for the site. Please include this in the next water management plan update to Ch.9.	BW Gold acknowledges the comment. The climate change assessment for the Blackwater Project is located in Appendix 2-B (2020 Hydrometeorology Report). When the next interation of the Hydrogeteorology Report is developed for the Project, the climate change assessment section will also be updated to include a discussion justifying the most appropriate SSP and RCP for the project site. It can then be incorporated into updates to various management plans during operations, if required.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Sep 16	Ready for Publishing
1338	Appendix 5-B 3.4		LDN/UFN		Jun 11, 2022	1	New		No	The section is noted as post closure 'to perpetuity' and references water treatment in the long term, if brine from the WTP is sent to the base of the pit lake, what is the storage capacity of the pit lake to handle the flow?	The open pit has a total storage volume of approximately 216 Mm3. The pit lake volume associated with the target pit lake water elevation is approximately 158 Mm3. Water will be removed from the pit lake for treatment at the Membrane WTP in Post-Closure at a rate approximately equal to the total inflow rate so that the pit lake elevation remains approximately constant.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1339	Appendix 5-B 4.4.2		LDN/UFN		Jun 11, 2022	1	New		No	Seepage recovery at the TSF is estimated at 98%, what factors lead to this high recovery rate?	The key factors in the effectiveness of the seepage recovery system include: -A relatively low effective vertical hydraulic conductivity of the overburden soils, as evidenced by the downward gradient and perched water levels at the site. -Placement of embankment drains beneath all dam footprints to facilitate collection of seepage. -The Environmental Control Dam (ECD) is located in a topographic low point about 1 km downstream of Main Dam D; the physiography of the area concentrates groundwater flow towards this location. -Seepage interception trenches located near the ECD will be excavated into low permeability soils. The trenches will extend 1.6 km north and south from the ECD and will collect groundwater and potential seepage. -Shallow seepage flow paths are restricted by cut-off trenches constructed below embankments, where permeable sediments are present. The cut off trenches extend the low permeability dam core into the low-permeability sub-grade soils. This limits seepage flows through coarse-grained surficial materials and concentrates flow towards embankment drains. -Seepage will be limited and controlled by the low-permeability core zone material and HDPE liners incorporated into the design of the facility.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1340	Appendix 5-B 4.7		LDN/UFN		Jun 11, 2022	1	New		No	Compacted glacial till represents the majority of the surface area of the low permeability liner for the LGO stockpile. Please comment on the likelihood of the glacial till to meet the threshold of a low permeability line (<1x10-9 m/s) given its natural range in material properties	The Zone S material specification for the low permeability liner for the LGO Stockpile contains 20% to 60% fines (passing the #200 sieve size), which is consistent with the glacial till present at the site. Glacial till meeting the Zone S material gradation specification and compacted as specified is expected to achieve a permeability between approximately 1x10-8 and 1x10-10 m/s. Glacial till gradations near the fine limit of the gradation envelope could generally be expected to produce a lower permeability liner than materials closer to the coarse limit.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1340	Appendix 5-B 4.7		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Clarification	No	What is the specification for permeability for the compacted till layer below LGO? 10-8 or 10-9 m/s? Please confirm. What will the borrow area and placed specification for the till (PSD?, % fines?, A Limits?)	A specification for the permeability for the compacted till (Zone S) layer below the LGO is not currently included in the design package or specifications. The specifications for particle size distribution for the Zone S material, including %fines, are described in the above response and shown on Drawing G0040 included in Appendix D of Appendix 3-N (Stockpiles Geotechnical and Water Management Design Report) of the Application. Placement specifications for Zone S material require compaction to 95% of standard proctor maximum dry density (SPMDD). Locally available glacial till meeting the Zone S specifications generally has a liquid limit ranging from non-plastic (NP) to approximately 50 and a plastic limit of NP to approximately 30. The average natural moisture content of the locally available glacial till at the site is similar to the optimum moisture content determined from the SPMDD testing. The design criteria will be reviewed and confirmed as part of the Issued for Construction (IFC) design drawing and technical specifications package, and will include consideration of additional investigations planned to be performed beginning in fall 2022 for the LGO Stockpile foundation. The final borrow area will be determined prior to construction in consideration of additional borrow area investigations, the planned construction sequence, and equipment scheduling.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1341	Appendix 5-B 4.8.4		LDN/UFN		Jun 11, 2022	1	New		No	Please comment on the capacity of the WMP with time given the mill rate and the decrease in WMP capacity at Year 10	Once the mill throughput increases in Year 6, the Water Management Pond (WMP) is modelled to accumulate a full pond volume only during freshet (based on average climate inputs) (Figure 6.28 of Appendix 5-B). Water demand in the mill is sufficiently high that water contributing to the WMP flows out before filling the pond in most months. The decrease in operating pond volume of the WMP in Year 10 therefore does not have a substantial influenceon the water balance.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1342	Appendix 5-D 2.4.2		LDN/UFN		Jun 11, 2022	1	New		No	Please comment on the difference and the distinction between NAG 4 and 5, is use of NAG 5 allowed in instances where NAG4 is not?	NAG4 has a zinc content between 600 and 1000 ppm, while NAG5 has a zinc content < 600ppm; however, the difference between zinc leaching potential between the two material types is small to negligible. Both NAG4 and NAG5 can be used for construction. As an additional layer of conservatism, NAG5 material should be prioritized in the construction of infrastructure where possible, in particular near water courses.	RT/TD to review	LDN/UFN	Lorax		John	GM		GM; June 29	Ready for Publishing
1343	Appendix 5-D 3.2.3		LDN/UFN		Jun 11, 2022	1	New		No	Section Title: Replicating LOM WB in Goldsim - does the current WB remain in Excel format? State of practice would expect a complicated WB like BW site in a GoldSim or equivalent customized program	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing

1344	Appendix 5-D 3.2.6		LDN/UFN		Jun 11, 2022	1	New		No	Table 3-1 - mitigation measures outline the controls in place to mitigate passive discharge from the pit lake. Is it correct to assume that the pit lake will be unsuitable for discharge in perpetuity?	The pit lake is currently modelled as a fully-mixed reservoir. Regarding the water balance of the pit lake in post-closure and discussed further in Comment 555, it is envisaged that the post-closure treatment system will prevent passive discharge from the system. Modelled this way, version 12b water quality predictions suggest pit lake water quality will be unsuitable for discharge in post-closure. Detailed pit lake modelling work is ongoing with PitMod, a 1-D hydrodynamic lake water quality model. Among the end goals of the pit lake modelling work is to determine, if and when, the pit lake will develop into a fully stratified 'two-layer' system. PitMod results may demonstrate that the pit lake will evolve to a stable two-layer system with better predicted water quality in the surface layer (e.g., upper 10 m of the water column), rather than poorer water quality that comprises the deeper layer of the pit lake. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		Colin/Meghan	GM	Ready for Submission	GM; June 22	Ready for Publishing
1345	Appendix 5-D General		LDN/UFN		Jun 11, 2022	1	New		No	What is the nature of the pit wall above the anticipated final pit lake elevation? Please comment on whether pit walls are PAG and the impacts on pit lake water quality in the long-term	PAG exposures remain above the final pit lake elevation and are expected to continue to contribute loads to the pit lake through the Post-Closure period. The percentage of pit wall above each bench elevation, divided by rock class (e.g., PAG1, PAG2, NAG3, etc...) is included as Table 5.3.1 of the ML/ARD Management Plan (Appendix 9-D of the Application). These proportions are incorporated into the water quality model and pit lake predictions are presented in the Water Balance and Water Quality Model Report (Appendix 5-D).Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		John	GM		GM; June 29	Ready for Publishing
1346	Appendix 5-D 3.3.4.2		LDN/UFN		Jun 11, 2022	1	New		No	The final paragraph speaks to recommendations for detailed hydrodynamic modelling of the pit lake. Please comment on the confidence that appropriate management and treatment measures for developing pit lake water quality are in place given the requirement to actively manage pit lake levels post-closure	Detailed hydrodynamic modelling of the Blackwater pit lake has been completed to better inform the evolution of pit lake physical and chemical structure over time (results forthcoming). While such models provide a robust means of predicting future conditions, some uncertainty exists in relation to various geochemical (e.g., pit wall loading rates) and physical factors (e.g., magnitude of surface and groundwater inflows). However, given that the pit will take multiple decades to fill, there will be ample time to identify deviations from the initial predictions, and adjust mitigation planning accordingly. Specifically, post-closure monitoring of the water column will be used to validate predictions of lake physical structure (depth and magnitude of pit lake stratification) and water quality conditions. Given the time available to validate predictions, considerable confidence exists with regards to our ability to effectively manage the pit lake in the post closure period.Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		??/Alan	GM		GM; June 29	Ready for Publishing
1347	Appendix 5-D 5		LDN/UFN		Jun 11, 2022	1	New		No	Closure and Post-Closure summary - the results indicate exceedances in Cd and Zn in all months as well as several parameters less frequently from TSF spillway. The next summary point acknowledges exceedances in Davidson Creek likely from TSF Pond C overflow. Please comment on the likelihood of the water management strategy to manage water volumes on site without WQ exceedances and adverse impacts on the downstream Davidson Creek watershed.	This comment is acknowledged. It is noted that the temporal scope of the Joint Mines Act / EMA permits application was agreed upon during IRT development to include the Construction and Operations phases. That said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1348	Appendix 5-B 4.5		LDN/UFN		Jun 11, 2022	1	New		No	Brine from the membrane WTP is to be sent to the pit lake in post-closure. Comment on the ability to maintain meromixis with perpetual discharge of brine to the pit lake	The pit has a finite capacity to receive brine while still maintaining meromixis. A fresher (lower salinity) cap on the order of 10-30 m in thickness will be required to maintain meromixis and prevent the mixing of brine waters into the lake surface. Detailed hydrodynamic modelling of the Blackwater pit lake has been completed to better inform the evolution of pit lake physical and chemical structure over time (results forthcoming). Please refer to comment response 1624 for additional detail. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1348	Appendix 5-B 4.5		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Carry to Round 3 - pending review of pit lake modelling upon completion/receipt	BW Gold acknowledges this comment and looks forward to discussing further in Round 3.		LDN/UFN	Lorax					GM; Aug 5	Ready for Publishing
1348	Appendix 5-B 4.5		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		No	Okane has not been provided with this document for review.	This comment is acknowledged. BW Gold provided "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf" and "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624.pdf" to LDN and UFN on September 8, 2022.		LDN/UFN	Lorax		Georges		Ready for Submission	GM; Sept 14	Ready for Publishing
1349	Appendix 5-B 4.7		LDN/UFN		Jun 11, 2022	1	New		No	Can the glacial till be compacted sufficiently to meet the requirements of a "low permeability liner"?	Yes, please see response to Comment ID #1340 above.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1350	Appendix 5-B 4.7		LDN/UFN		Jun 11, 2022	1	New		No	Infiltration into the LGO stockpile can be minimized using INAP guidance for building mine rock stockpiles. Update water balance accordingly	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	BWG	KP	Cindy/Travis	TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1351	Appendix 5-B 4.9, Metals WTP, second paragraph		LDN/UFN		Jun 11, 2022	1	New		No	A metals treatment pond upstream of the Metals WTP will temporarily collect and store water from all the sources them before treatment. Remove "them" from sentence	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1352	Appendix 5-B 8.1		LDN/UFN		Jun 11, 2022	1	New		No	Were the GCMs downscaled to meet site-specific conditions? GCM grids are too coarse for use on the scale of a mine-site	BW Gold agrees that the grids are too coarse for a mine-site scale. The downscaled GCM was never meant to provide an estimate of the site-specific condition.	No	LDN/UFN	KP		Jaime	AT/KP	Ready for Submission	KP, June 23	Ready for Publishing
1353	Appendix 5-B Table 8.1		LDN/UFN		Jun 11, 2022	1	New		No	The mine is expected to require active maintenance and monitoring in perpetuity. This is specifically related to water, as the membrane WTP will continue in perpetuity, as will pumping of the pit lake. How does the applied climate change scenario apply beyond 2050?	Please see response to comment ID 1304	RT/TD to review	LDN/UFN	KP		Jaime/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1354	Appendix 5-I executive summary, final paragraph		LDN/UFN		Jun 11, 2022	1	New		No	characterizing potential effects to VCs in the Application. - define VC?	VC is defined as Valued Components. BW Gold appreciates the comment. However, the application is not being updated.	No	LDN/UFN	Entia		Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
1355	Appendix 5-I all		LDN/UFN		Jun 11, 2022	1	New		No	define acronyms the first time used, don't need to include (acronym) after that.	BW Gold appreciates the comment. However, the application is not being updated. If the Conceptual Site Model report is updated in the future, a check will be completed to define all acronyms on first use.	No	LDN/UFN	Entia		Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
1356	Appendix 5-I general		LDN/UFN		Jun 11, 2022	1	New		No	field duplicates/blanks?	It is not clear what the comment is referring to. Field duplicate/blanks are described in the baseline reports from which the data were taken (e.g., Appendix 2-K, 2011 to 2020 Surface Water Quality Baseline Report), which were referenced in the Conceptual Site Model (CSM) report. No field work or data collection was specifically completed for the CSM report that was not already included in an underlying baseline report. Should LDN/UFN provide some additional clarity on the comment, BW Gold can provide an additional response.	No	LDN/UFN	Entia		Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
1357	Appendix 5-I 3		LDN/UFN		Jun 11, 2022	1	New		No	Receptors of concern included Aquatic Life (primary producers, benthic invertebrates, and fish), terrestrial and semi-aquatic Vegetation ROC, various Wildlife ROCs, and several Human ROC groups. - use acronym but don't need it twice (i.e... ROC included ..... vegetation ROC).	BW Gold appreciates the comment. However, the application is not being updated at this time.	No	LDN/UFN	Entia		Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
1358	Appendix 5-F 2.4.1		LDN/UFN		Jun 11, 2022	1	New		No	I don't think HSU has been defined yet. Confirm it has been defined before using acronym.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1359	Appendix 5-F 2.4.2		LDN/UFN		Jun 11, 2022	1	New		No	Depressed water levels along Davidson Creek valley and may be related to a buried sand and gravel deposits.	BW Gold acknowledges this comment.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1360	Appendix 5-F 4.3.1		LDN/UFN		Jun 11, 2022	1	New		No	The waste rock unit was assigned a relatively high permeability value (1x10-3 m/s) to represent free draining coarse material. - was this ever characterized or is it just an assumed estimate?	An assumed hydraulic conductivity value was assigned to the waste rock placed in the TSF. The value was selected to represent free-draining coarse material. The selected value is within the range of permeabilities expected for coarse-grained materials (Freeze and Cherry, 1979; Dominico and Schwartz, 1990). The upper bound of the assigned permeability value was limited by model convergence.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1361	Appendix 5-D Page 2-2		LDN/UFN		Jun 11, 2022	1	New		No	There is highlighted text. Please remove.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1362	Appendix 5-D 2.1		LDN/UFN		Jun 11, 2022	1	New		No	Would not expect the water balance for a project of this size / complexity to be hosted in Excel format. The industry standard is GoldSim	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy/Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing

1363	Appendix 5-F 4.3.1		LDN/UFN		Jun 11, 2022	1	New		No	operations, closure, and post-closure recharge rates - how were these determined? They seem like arbitrary values the way it is presented here.	The recharge rate assigned to the tailings surface during Operations was selected as approximately 10% of the water discharged with the tailings that is not held in the tailings voids. The recharge rate applied during Post-Closure was selected to be higher than the baseline recharge rate for the glacial till (middle) to represent additional ponding of water on the relatively flat surface. The recharge rate in Closure was assigned to be higher than the Post-Closure rate to represent an expected lower rate of evapotranspiration from the unvegetated surface compared to in Post-Cloure.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1364	Appendix 5-F 4.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Drain conductance was assigned a value high enough to allow water to drain freely into the open pit while minimizing mass balance error and preventing convergence issues. - what is the value?	A conductance value of 5.4E5 m2/s was assigned to the open pit drain cells.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
1365	Appendix 5-F 4.3.5		LDN/UFN		Jun 11, 2022	1	New		No	The pond footprint was not explicitly represented in the model. - why, and how is this expected to impact model results?	The Water Management Pond (WMP) will be lined with an HDPE liner. The WMP was not explicitly incorporated in the numerical groundwater model since assessing potential seepage pathways originating from the lined facility was not an objective of the modelling work. Once the pond is constructed, meteoric recharge to groundwater beneath the pond footprint will be restricted. Excluding the WMP footprint from the groundwater model is not expected to influence the simulated seepage pathways or travel times from other facilites by a consequential amount.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1365	Appendix 5-F 4.3.5		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	please provide supporting documentation showing the WMP footprint does not influence seepage pathways or travel times, as stated.	Documentation showing the predicted pathways of seepage from proposed mine facilities is provided on figures in Appendix E1 of Appendix 5-F. As shown on those figures, modelled seepage paths from the facilities upslope of the WMP (Lower Waste Stockpile, Upper Waste Stockpile, and Low-Grade Ore Stockpile) are not predicted to reach the WMP. It is therefore reasonable to assume that representation of the modelled WMP does not influence seepage pathways or travel times. Seepage that discharges to the drainage leading to the TSF C and WMP (symbolized by the red flow paths on Appendix E1 figures) contributes to the WMP in the water balance and then to the downstream environment in Davidson Creek via the FWR. If seepage was to instead be conveyed under the WMP it would discharge to the TSF C Pond, which is less conservative with respect to water quality considerations since it would no longer contribute to the receiving environment.		LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1366	Appendix 5-F 6.1		LDN/UFN		Jun 11, 2022	1	New		No	Geologic units that have potential to be primary seepage pathways for conveying seepage from the TSF include the following: - redundant. Remove "for conveying seepage"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1367	Appendix 5-F 6.1		LDN/UFN		Jun 11, 2022	1	New		No	It is possible the extent and presence of lower permeability layers are under-represented in the model especially along the lower slopes of Mt. Davidson between the TSF and deposit. - what impact does this have on results: added conservatism?	Low permeability glaciolacustrine units were incorporated in the model if identified to be possibly continuous. Under-representation of lower permeability materials in the model is believed to provide less restriction of vertical groundwater flow and leads to increased conservatism in estimated seepage rates from the mine facilities.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
1367	Appendix 5-F 6.1		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	provide supporting documentation that introducing less vertical flow restriction does not result in horizontal movement of water that is not representative of the site conditions.	A TSF seepage sensitivity using the numerical groundwater model is documented in Section 5.3 of Appendix 5-F. TSF seepage sensitivity scenario S3 assesses the effect of introducing less vertical flow restriction (i.e., higher vertical permeability) in the foundation material beneath the TSF. A seepage rate of 98 L/s is predicted for the S3 sensitivity scenario, about 33 L/s higher than base case conditions. This suggests that the under-representation of low permeability glaciolacustrine materials in the numerical model introduces conservatism through the over-estimation of seepage rates from the facility.		LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1368	Appendix 5-F Appendix C Figure C2		LDN/UFN		Jun 11, 2022	1	New		No	add label for orange material (bedrock?)	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1369	Appendix 5-F		LDN/UFN		Jun 11, 2022	1	New		No	it would be helpful to have relevant figures in the text instead of just as appendix	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1370	Chapter 3 Context Statement (page i)	Table of Concordance	LDN/UFN		Jun 11, 2022	0			No	Table of Concordance is missing.	The Table of Concordance has been included in the final submission along with the Information Requirements Table (IRT).	RT/TD to review	LDN/UFN	KP			AT/KP	N/A		
1370	Chapter 3 Context Statement (page i)	Table of Concordance	LDN/UFN		Jun 11, 2022	1	New		No	Still missing.	Thank you for noting this. While BW Gold acknowledges that we have previously indicated that this table would be added, the Application is not being edited further at this time. This comment will be noted, and this edit will be incorporated into a future version of the Application.	RT/TD to review	LDN/UFN	ERM			RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1371	Chapter 3 Section 3.5.3.5	Dam Breach Effects Assessment	LDN/UFN		Jun 11, 2022	0			No	Conservative estimates of effects to fish habitat, wildlife habitat, and terrestrial ecosystems predicted a short-term habitat loss with rapid recovery; however, some areas, such as those closest to the TSF in Davidson Creek, would be affected for a longer period of time. If possible, provide more detail on estimates for each habitat/ecosystem (e.g. "short-term" vs "longer period of time")	Details of the estimates are provided in the referenced documents. These have been reviewed as part of the EA process and provided in a stand alone report. ERM. 2015. Blackwater Gold Mine Project: Dam Breach Effects Assessment. Prepared for New Gold Inc. by ERM Consultants Canada Ltd.: Vancouver, British Columbia. The following text has been added to the Application. Areas closest to the TSF breach will have a greater impact on surface water flow, changes to surface water quality and changes to sediment. Effects on fish and aquatic habitat are likely to be caused from erosion and sedimentation resulting from the smothering of eggs, decreased feeding efficiency, habitat avoidance, smothering of aquatic invertebrates, and loss of productive habitat capacity. Kokanee, Rainbow Trout and other fish species in Davidson Creek, Chedakuz Creek, and Tatelkuz Lake will be affected. Fish and aquatic organisms immediately downstream of the TSF, particularly in Davidson Creek, could experience direct mortality or habitat loss as a result of flooding and mobilization of debris, and erosion and sedimentation. In the two modelled scenarios, i.e. sunny day and rainy day, there is a predicted loss or alteration of 100 km of stream fish habitat and 676 ha of lake or pond habitat or 198 km of stream fish habitat and 735 ha of lake or pond habitat, respectively. The greatest losses will occur closest to the dam breach with lesser effects further downstream (Section 7.2.4 Fish and Fish Habitat). Terrestrial habitats closest to the source of inundation waters on near Davidson Creek include wetlands and old growth forest ecosystems and are the most likely terrestrial ecosystems to be affected, with listed ecosystems and floodplain ecosystems affected to a lesser extent. The terrestrial habitats lost by sunny day and rainy day dam breaches are described in Section 7.2.6 Effects Terrestrial Ecology of ERM (2015c). For wildlife species, sunny and rainy day dam breaches would result in the downstream habitats. These would include: woodland caribou, moose, grizzly bear, American marten, little brown myotis, ring-necked duck, yellow rail, olive-sided flycatcher, red-tailed hawk, and western toad. The greatest affects would be to habitat would be those which are near low lying or riparian areas. Hence, grizzly bear, American marten, ring-necked duck, yellow rail, and western toad would lose a greater portion of their baseline habitat in the Regional Study Area (6 to 11%). Details of the effect on wildlife and wildlife habitat are found in Section 7.2.5 Effects on Wildlife and Wildlife Habitat of ERM (2015c).	No	LDN/UFN	KP			AT/KP	N/A		
1371	Chapter 3 Section 3.5.3.5	Dam Breach Effects Assessment	LDN/UFN		Jun 11, 2022	1	New		No	"For wildlife species, sunny and rainy day dam breaches would result in the downstream habitats." ...would result in downstream habitats being affected? Please adjust wording of sentence "The greatest affects would be to habitat would be those which are near low lying or riparian areas." Sentence doesn't really make sense. Also, affects should be effects. Section references need to be tied to a document, e.g. Section 7.2.4 Fish and Fish Habitat - which plan?? Better summary of ecosystems impacted, but could provide a summary differentiating "short-term" and "longer period of time" or specific reference to where this can be found (including plan).	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1372	Chapter 3 Figure 3.5-45	Diagram	LDN/UFN		Jun 11, 2022	0			No	What is the red point (2.88) portraying?	It indicates the calculated factor of safety value for the critical slip surface in the analysis.	No	LDN/UFN	N/A			0		GM; June 28	Ready for Publishing

1372	Chapter 3 Figure 3.5-45	Diagram	LDN/UFN		Jun 11, 2022	1	New		No	This should be indicated on the figure.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1373	Chapter 3 Figure 3.5-49	Diagram	LDN/UFN		Jun 11, 2022	0			No	Same as above comment.	It indicates the calculated factor of safety value for the critical slip surface in the analysis.	No	LDN/UFN	N/A			0			
1373	Chapter 3 Figure 3.5-49	Diagram	LDN/UFN		Jun 11, 2022	1	New		No	Same as above reply - please clarify within figure.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1374	Chapter 3 Section 3.5.6.3	Central Water Diversion System	LDN/UFN		Jun 11, 2022	0			No	"The design flow was selected to minimize spill into the TSF to the extent practical and the selected flow rate corresponds to the 92nd percentile flow contributing to the Central Diversion System Water Transfer Pond." - What does "to the extent practical" mean specifically? Are there specific regulatory, design, or other requirements to meet in this regard? - Why was 92nd percentile flow selected? - Similar questions for phase 2 water transfer pond - why is the design flow chosen to remain at 300 L/s?	Extent practical and other variations of this statement, such as to the extent reasonably practicable, means technically feasible and cost effective/efficient. There are no specific regulatory requirements to meet in this regard. The design flow rate of 300 L/s was selected based on the storage volume behind the central diversion weir and the recommended cycle rate of the pumps to prevent motor burnout from excessive start up and shut downs. 300 L/s was found to be the optimal flow rate to move as much water as possible without causing excessive wear and tear. 300 L/s corresponds to the 92nd percentile flow.	No	LDN/UFN	N/A			0	N/A		N/A
1374	Chapter 3 Section 3.5.6.3	Central Water Diversion System	LDN/UFN		Jun 11, 2022	1	New		No	No specific answer to why 92nd percentile flow and design flow to remain at 300L/s were selected.	The design flow rate of 300 L/s was selected based on the storage volume behind the central diversion weir and the recommended cycle rate of the pumps to prevent motor burnout from excessive start up and shut downs. 300 L/s was found to be the optimal flow rate to move as much water as possible without causing excessive wear and tear. 300 L/s corresponds to the 92nd percentile flow.	No	LDN/UFN	KP		MJB	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1375	Chapter 3 Mine Plan Section 3.3	Life of Mine Plan	LDN/UFN		Jun 11, 2022	0			No	Ongoing and completed reclamation areas Missing.	The ongoing and completed reclamation areas are summarized in various subsections of Chapter 3 (Mine Plan) corresponding to the Construction, Operating, Closure and Post-Closure Phases as follows: Table 3.3-3 Construction Phase activities (Offsite and Stockpiling); Section 3.3.4.5 Operations Year +19 to Y+23 and Table 3.3-7; Section 3.3.4.6 Closure Year Y+24 to Y+45 and Table 3.3-8; and Section 3.3.4.7 Post Closure Y46+ and Table 3.3-9 and Figure 3.3-15.	No	LDN/UFN	KP			AT/KP	N/A		
1375	Chapter 3 Mine Plan Section 3.3	Life of Mine Plan	LDN/UFN		Jun 11, 2022	0			No	Ongoing/progressive reclamation is not explicitly discussed in Tables 3.3-3 to 3.3-5 (or associated sections)	Ongoing/progressive reclamation is noted in Tables 3.3-3 to 3.3-5 as follows: Table 3.3-3 Summary of Construction Phase Activities - Topsoil Stockpiles : Vegetation clearing, grubbing, site leveling, stockpiling, and maintenance of salvaged soils - Off-Site Infrastructure (Non-Application Components) : Decommissioning of Exploration Access Road; Decommissioning of the Mount Davidson Exploration Road Table 3.3-4 Summary of Year +1 to Year +5 Activities - Ongoing Use and Maintenance: Topsoil stockpiles Table 3.3-5 Summary of Year +6 to Year +10 Activities - Ongoing Use and Maintenance (Topsoil stockpiles erosion control and invasive plant management) Comment will be addressed during application review based on direction from MMO	No	LDN/UFN	KP			AT/KP	N/A		
1375	Chapter 3 Mine Plan Section 3.3	Life of Mine Plan	LDN/UFN		Jun 11, 2022	1	New		No	More detail required. Follow up needed on "Comment will be addressed during application review based on direction from MMO"	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	No	LDN/UFN	ERM			RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1375	Chapter 3 Mine Plan Section 3.3	Life of Mine Plan	LDN/UFN (Emma Cooke)		Jul 22, 2022	2	Follow up	Information Requirement	No	Please provide a memo outlining ongoing and completed reclamation areas or a commitment to include this information in the Reclamation and Closure Plan or the End Land Use Plan. Requesting comment from EMLI on this as well.	EMLI along with LDN and UFN and other Indigenous Nations were provided with the 2021 BW Gold Annual Reclamation Report (ARR) for the M-246 Permit which included the information requested by the reviewer in section 2.1 of the report.		LDN/UFN	BWG				Ready for Submission	TD, Aug 11	Ready for Publishing
1376	Chapter 3 Mine Plan Section 3.5.4	Tailings Storage Facility and Associated Infrastructure	LDN/UFN		Jun 11, 2022	0			No	Assessment of potential for static and seismic liquefaction for tailings, construction materials, and foundation materials. The liquefaction assessment only states assessing foundation materials, missing an assessment of tailings and construction materials.	Liquefaction potential for foundation materials is presented in Section 3.5.3.7 of Chapter 3. The construction materials will be comprised of compacted overburden and rockfill materials, which are not expected to pose a risk of liquefaction given the relatively low seismic hazard at the site. The tailings are assumed to be potentially contractive and liquefiable. Tailings do not form a structural component of the TSF dams and will be substantially separated from Main Dam C by the PAG/ML waste rock disposal area until approximately Year +7 of operations. Site-specific tailings behavioral characteristics will be further assessed during the early mine operations phase to inform the on-going design and construction of TSF C beginning at Stage 6 (when tailings will be retained directly adjacent to Main Dam C). The liquefaction potential of foundation and construction materials will be re-evaluated periodically during mine operations as part of the detailed design of each stage of construction.	No	LDN/UFN	KP			AT/KP	N/A		N/A
1376	Chapter 3 Mine Plan Section 3.5.4	Tailings Storage Facility and Associated Infrastructure	LDN/UFN		Jun 11, 2022	0			No	Please update the plan to include this explanation.	Thank you for the comment. We will consider these comments and stated preferences in the future; however, no changes are being made to the way the information has been presented. Please refer to the Application section and referenced reports for the final details of the assessment. The potential for liquefaction of tailings and construction materials is discussed in Section 4.1 of Appendix 3-Z of the Application.	RT/TD to review	LDN/UFN	KP			AT/KP	N/A		
1376	Chapter 3 Mine Plan Section 3.5.4	Tailings Storage Facility and Associated Infrastructure	LDN/UFN		Jun 11, 2022	0			No	Not all of the explanation noted has been included in section 3.5.3.7	Thank you for the comment. We will consider these comments and stated preferences in the future; however, no changes are being made to the way the information has been presented. Please refer to the Application section and referenced reports for the final details of the assessment. The potential for liquefaction of tailings and construction materials is discussed in Section 4.1 of Appendix 3-Z of the Application.	No	LDN/UFN	KP			TD	N/A		N/A
1376	Chapter 3 Mine Plan Section 3.5.4	Tailings Storage Facility and Associated Infrastructure	LDN/UFN		Jun 11, 2022	1	New		No	No response provided.	Thank you for noting this. While BW Gold acknowledges that we have previously indicated that it would add this information, the Application is not being edited further at this time. This comment will be noted, and this edit will be incorporated into a future version of the Application.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1377	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN		Jun 11, 2022	0			No	A description of potential risks posed by geohazards and mitigation measures. Missing mitigation measures.	Section 3.5.8.5 states that overall risk to the mine site from seismicity and other geohazards is low. This section references Section 2.3.4 of the Application (Natural and Seismic Hazard Assessments). No special mitigation measures are currently planned for the mine access and haulage roads other than typical cut and fill slope angle adjustments based on ground conditions encountered during construction.	No	LDN/UFN	KP			AT/KP	N/A		
1377	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN		Jun 11, 2022	0			No	Recommend including "No special mitigation measures are currently planned for the mine access and haulage roads other than typical cut and fill slope angle adjustments based on ground conditions encountered during construction." in section 3.5.8.5 as listing mitigation measures is a requirement of the JAIR.	BW Gold acknowledges the comment. No change has been made to Section 3.5.8.5.	No	LDN/UFN	N/A			0			
1377	Chapter 3 Mine Plan Section3.5.8	Mine Access and Mine Haulage	LDN/UFN		Jun 11, 2022	0			No	Please update to include No special mitigation measures are currently planned for the mine access and haulage roads other than typical cut and fill slope angle adjustments based on ground conditions encountered during construction." in section 3.5.8.5 as listing mitigation measures is a requirement of the JAIR.		No	LDN/UFN	N/A			0			
1377			LDN/UFN		Jun 11, 2022	1	New		No	No response provided.	Thank you for the comment. We will consider these comments and stated preferences in the future. However, no changes are being made to the way that the information has been presented. Additional information related to terrain stability is presented in Appendix 3-X1 of the Application.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing

1377	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN (Emma Cooke)		Jul 22, 2022	2	Follow up	Information Requirement	No	Listing mitigation measures is a requirement of the JAIR. Please address how you will meet this requirement if not providing any updates to the plan. Request a memo.	The approach to managing the limited terrain stability risks at the project site is described in Appendix 3-X1 of the Application. Terrain stability assessments during construction will adopt a risk-based approach to determine the extent of any necessary mitigation measures and should address the possibility of enhanced likelihood of erosion as well as landsliding as a result of the proposed vegetation clearance and earthworks. The types of temporary mitigation measures could include additional control of surface and subsurface water, adjustment to construction methods and activity sequencing, adjustment to cut and fill design slope angles, and temporary support/stabilization (e.g. buttressing, soil nailing, rock bolting, etc...).		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 02	Ready for Publishing
1378	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN		Jun 11, 2022	0			No	Geotechnical assessments and stability analyses by a Professional Engineer (for cuts/fills over 6 m high) Missing stability analyses and name and stamp of the Professional Engineer. Appendix 3-E does not exist, which was referenced for the geotechnical characterization.	Appendix 3-E (2020-2021 Geotechnical Site Investigation Data Report), signed and stamped by a professional engineer, is included in the Application. Section 3.5.8 references a historical geotechnical characterization report (KP, 2013e), which was not included in the application. This reference has been replaced in Section 3.5.8.2 and now refers to Appendix 3-V, which was added and includes 2012 and 2013 Site Investigation Reports. The text will be updated to remove reference to KP, 2013e. The stability analyses for the MAR was included in the Special Use Permit (SUP) Application - the following text, adapted from the SUP Application, will be copied into Section 3.5.8: "Terrain and terrain stability associated with the MAR was assessed as part of the soil, terrain, and surficial geology baseline report compiled to support the Application for an Environmental Assessment Certificate (Appendix 5.1.3.2A of the EA Application; AMEC 2013a). The assessment was based on inferred underlying parent materials, regional mapping and site-specific information from soil inspections, interpretation of Light Detection and Ranging (LiDAR) Digital Elevation Model data, aerial photography, and satellite imagery, as well as published sources were applied to the interpretation of terrain conditions. The terrain stability assessment rated approximately 98% of the MAR area as stable (Classes I, II, and III; the remaining 2% are watercourse crossings). Polygons with a Class III rating were considered stable; however, stability issues may develop if surface or drainage conditions are considerably altered. Class III terrain stability units occupy 3% of the MAR area. Based on aerial photo and LiDAR interpretation, no potentially unstable (Class IV) or unstable terrain (Class V) were identified in proximity to the MAR. For this reason, LiDAR and stereo photo imagery has not been included with the SUP application. If unstable slopes are encountered during construction, a geotechnical engineer will be consulted and recommendations may be incorporated into its design and/or alignment." The terrain stability map adapted from the EA Application is included in Chapter 2, Figure 2.3-10 Terrain Stability Classes within the Mine Site.	No	LDN/UFN	KP			AT/KP	N/A		
1378	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN		Jun 11, 2022	0			No	Resolved. Review team will need access to Appendix 3-V when it becomes available.	Appendix 3-V has been included in the updated Application.	No	LDN/UFN	N/A			0			
1378	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN		Jun 11, 2022	0			No	Partially resolved. The following has not been included in the updated plan as per Artemis response "For this reason, LiDAR and stereo photo imagery has not been included with the SUP application. If unstable slopes are encountered during construction, a geotechnical engineer will be consulted and recommendations may be incorporated into its design and/or alignment." The terrain stability map adapted from the EA Application is included in Chapter 2, Figure 2.3-10 Terrain Stability Classes within the Mine Site."		No	LDN/UFN	KP			AT/KP	N/A		
1378	Chapter 3 Mine Plan Section 3.5.8	Mine Access and Mine Haulage Roads	LDN/UFN		Jun 11, 2022	1	New		No	Response not provided.	Thank you for noting this. While BW Gold acknowledges that we have previously indicated that it would add this information, the Application is not being edited further at this time. This comment will be noted, and this edit will be incorporated into a future version of the Application.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1379	Chapter 3 Mine Plan Section 3.5.11	Ancillary Facilities and Support Infrastructure	LDN/UFN		Jun 11, 2022	0			No	A description of potential risks posed by geohazards and mitigation measures. Missing mitigation measures.	Potential risk to ancillary facilities with natural and seismic hazards are discussed in Section 2.3.4 Natural and Seismic Hazards Assessments. In general, the overall risk to ancillary facilities from landslides and mass wasting, snow avalanches, flooding, forest fires, subsidence, and volcanic events is very low (Knight Piesold 2013c and Appendix 2-E). In BC a low seismic region is classified as Sa (0.2) <0.70 (BC Municipal Affairs and Housing 2018); hence, the mine site is well below the threshold for a low seismic region. Ancillary facilities will follow or exceed the BC Building Code 2018 seismic guidelines.	No	LDN/UFN	N/A			0			
1379	Chapter 3 Mine Plan Section 3.5.11	Ancillary Facilities and Support Infrastructure	LDN/UFN		Jun 11, 2022	0			No	No mention of mitigation measures, suggest adding them even though the risk to ancillary facilities is low-as it is a requirement of the JAIR.	BW Gold acknowledges the comment. No change has been made to Section 3.5.11.	No	LDN/UFN	N/A			0			
1379	Chapter 3 Mine Plan Section 3.5.11	Ancillary Facilities and Support Infrastructure	LDN/UFN		Jun 11, 2022	0			No	Unresolved. Suggest adding mitigation measures as it is a requirement of the JAIR. Reference is made to appendix 3-X1 for mitigiation measures posed by geohazards to ancillary facilities, however this appendix is terrain stability mapping and does not address mitigation measures. Please update.		No	LDN/UFN	KP			AT/KP	N/A		
1379	Chapter 3 Mine Plan Section 3.5.11	Ancillary Facilities and Support Infrastructure	LDN/UFN		Jun 11, 2022	1	New		No	Response not provided.	Thank you for noting this. The types of temporary mitigation measures could include additional control of surface and subsurface water, adjustment to construction methods and activity sequencing, adjustment to cut and fill design slope angles and temporary support/stabilization (e.g. buttressing, soil nailing, rock bolting, etc...). BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	KP		Dan/Greg	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1380	Chapter 3 Mine Plan Section 3.5.10	Explosives Storage Facilities	LDN/UFN		Jun 11, 2022	0			No	A description of all plans for explosive use during mine construction and operation. Only phase 1 and phase 2 storage plans are described.	Explosives storage facilities for construction will be consistent with what is described for phase 1, and explosives use for phase 3 will be consistent with what is described for phase 3. Text will be added to 3.5.10 to clarify.	No	LDN/UFN	ERM	BWG		RT	N/A		N/A
1380	Chapter 3 Mine Plan Section 3.5.10	Explosives Storage Facilities	LDN/UFN		Jun 11, 2022	0			No	Resolved - confirm addtional text has been included in the next update of this plan.	BW Gold acknowledges the comment and will update in the revised application Section 3.5.10.	No	LDN/UFN	ERM	BWG		RT	N/A		N/A
1380	Chapter 3 Mine Plan Section 3.5.10	Explosives Storage Facilities	LDN/UFN		Jun 11, 2022	0			No	Unresolved. No additions have been made.		No	LDN/UFN	ERM	BWG		RT	N/A		N/A
1380	Chapter 3 Mine Plan Section 3.5.10	Explosives Storage Facilities	LDN/UFN		Jun 11, 2022	1	New		No	Response not provided.	Thank you for noting this. While BW Gold acknowledges that we have previously indicated that it would add this information, the Application is not being edited further at this time. This comment will be noted, and this edit will be incorporated into a future version of the Application.	RT/TD to review	LDN/UFN	ERM	BWG		RT	Ready for Submission	CB; 20-Jun	Ready for Publishing

1380	Chapter 3 Mine Plan Section 3.5.11	Explosives Storage Facilities	LDN/UFN (Emma Cooke)		Jul 22, 2022	2	Follow up	Comment	No	This would've been a straightforward clarification to make in text, dissapointed changes were not made given how much time BW Gold had to make revisions.	The reviewers comment is acknowledged.		LDN/UFN	ERM	BWG			Ready for Submission	RT; Aug. 11	Ready for Publishing
1381	Appendix 3-B 4.3.1		LDN/UFN		Jun 11, 2022	1	New		No	Characterization of the dipping planes in pit are well understood and generally perpendicular to the final pit walls. Is there a directional mine plan schedule or process to avoid the faults during mining and ensure the safety of mine personnel and infrastructure in the short term and not the by year mine plan?	Detailed short-range mine plans (daily to 4-week outlook) will be developed in advance of operations, and continually updated throughout the operations. Face mapping of exposed geology will be an integrated component of the short-range mine plan. Exposed faces will be inspected on a daily basis by the operations supervisor (to meet the Health, Safety and Reclamation Code) to ensure safety of mine personnel.	No	LDN/UFN	MMTS	BWG	Marc S	AT	Ready for Submission	AT, June 19	Ready for Publishing
1382	Appendix 3-E		LDN/UFN		Jun 11, 2022	1	New		No	Ensure that data tabulated for Appendix 3-E includes and has incorporated all data from the 2012, 2013 and 2019 site investigation programs.	The report only covers the 2020-2021 site investigation work. Factual data from 2012, 2013 and 2019 are included in separate data reports and included as appendices to the Application (Appendix 3-V3, Appendix 3-V4 & Appendix 3-D, respectively).	No	LDN/UFN	KP		JBC/Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1383	Chapter 3 Table 3.3-9		LDN/UFN		Jun 11, 2022	1	New		No	TSF stated to be "closed" when WQ objectives are met, but Dams will continue to be monitored and reported on post closure. Will this continue into perpetuity by Artemis?	Dam safety monitoring will continue in the long-term following closure for the TSF and water management structures that are not decommissioned at closure. The schedule of monitoring and review activities may be adjusted to be less or more frequent periodically, depending on the status of the various site facilities.	Yes	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1383	Chapter 3 Table 3.3-9		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Comment	No	The "International Council on Mining and Metals" (ICMM) states that the closure plan should eliminate or minimize long term care and maintainence. BW Gold should explore alternatives such as decomissioning of the dam structure into a mine waste structure to eliminate monitoring and review of the dam structure into perpetuity.	Please indicate the reference document and associated section of the reference document where ICMM makes the statement being referred to in this comment. BW Gold would be pleased to review and discuss opportunities in the future with UFN and LDN related to facility decommissioning and relinquishment following mine operations and successful closure. Please provide examples of dam structures, including reference information or reports, that demonstrate the process by which these structures were decommissioned, and the criteria that were achieved to justify elimination of monitoring and review for the long-term for those structures.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1383	Chapter 3 Table 3.3-9		LDN/UFN (OKane_Blake Weinrauch)		Sep 01, 2022	3	Follow Up		No	The ICMM Integrated Mine Closure Good Practice Guide, 2nd Edition: https://www.icmm.com/website/publications/pdfs/environmental-stewardship/2019/guidance_integrated-mine-closure.pdf states the following on Page 18 in regard to long term care: "to design the closure plan to minimize or eliminate the need for long-term post-closure care and maintenance" The CDA released a technical bulletin on June 2, 2019 as a revision to Section 2.4 to the Application of Dam Safety Guidelines to Mining Dams document that states the following criteria to be satisfied in order to decommission a barrier that has previously impounded tailings (dam) into a mine waste structure. The criteria are as follows: 1. Ponded water will not propogate a failure or uncontrolled release of contents. 2. Contents do not and cannot flow (i.e., are not fluid like) and do not rely on a barrier structure to prevent an uncontrolled release. 3. Contents do not and cannot migrate or pipe through the structure or foundation. 4. Condtions will not develop in the future that could violate the previous three criteria. Additional details for each criteria are provided in said document that further speak to declassifying a tailings dam into a mine waste structure. Once the dam has been declassified, the monitoring an maintainance required for that of a mine waste structure would be significantly less than that of a tailings dam. Declassification reduces the needs for for DSR's, DSI's, and reduces OMS and EPRP requirements. Additionally, instrumentation monitoring can be severely reduced. A cost benefit analysis can be completed that compares the extra effort required to decommission the facility compared against the annual monitoring costs/ to determine if decommisioning is economically viable. To date, there are no current examples of a dam being decommisioned to a mine waste structure as per the CDA guidelines as they were first introduced in 2019.	Thank you for providing the requested reference information. We are also unaware of any current examples of a dam being decommissioned to a mine waste structure as per the CDA guidelines with associated relinquishment. BW Gold would be pleased to reveiw and discuss opportunities in the future with UFN and LDN related to facility decommissioning and relinquishment following mine operations and successful closure.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
1383	Chapter 3 Table 3.3-9		LDN/UFN (OKane_Mike O'Kane)		Dec 01, 2022	5	Follow Up		Yes	Based on the response, we recommend that BW Gold commit to regular FMEA workshops (e.g. annual), as part of a permit condition, that would support evaluation of credible potential failure modes in respect of long-term geotechnical stability to support dam safety review processes, which would allow for First Nations to provide their perspective on this facet of closure, and influence dam safety review processes.	The Health, Safety and Reclamation Code of BC (the Code; November 2022), Section 10.4.2 (1) (d) states: 'The manager of a mine with one or more tailings storage facilities shall .... review annually the tailings storage facility risk assessment to ensure that the quantifiable performance objectives and operating controls are current and manage the facility risks.' As the regular reivew of the TSF risk assessment is already codified, BW Gold respectfully disagrees that there is need for a permit condition, as suggested by the reviewer.		LDN/UFN	KP		Dan	TD	Ready for BWG Review	TD, Dec 8	Ready for Publishing
1383	Chapter 3 Table 3.3-9		LDN/UFN (OKane_Mike O'Kane)		Oct 06, 2022	4	Follow Up		No	Recommend that this comment be reviewed as part of a failure modes and effects analysis (FMEA), with failure modes that focus on closure risk for the TSF landform.	BW Gold acknowledges this comment.		LDN/UFN	KP		Dan	TD	Ready for Submission	AT, Oct26	Ready for Publishing
1384	Chapter 3 3.5.1.12		LDN/UFN		Jun 11, 2022	1	New		No	Will the pit lake be monitored into perpetuity during the post-closure phase?	The Pit Lake will be monitored through Post-Closure until closure objectives are met. As discussed in Section 4.2.5.4 (Pit Lake Water Treatment) in Chapter 4, Reclamation and Closure Plan, a reclamation research trial is planned to reduce concentrations of parameters of potential concern in the Pit Lake. This is expected to reduce the use of a water treatment plant and associated in monitoring.	Yes	LDN/UFN	ERM	BWG	Rolf - Peter	RT	Ready for Submission	RT: June 26	Ready for Publishing
1385	Chapter 3 3.5.3.5		LDN/UFN		Jun 11, 2022	1	New		No	As per the CDA guidelines, the dam hazard classification category for the environmental and cultural losses should be extreme rather than very high. The loss to critical fish and wildlife habitat would be major rather than significant in the case of a TSF dam breach. Although restoration or compensation was deemed possible yet impractical, the criteria for this category satisfies part of the classification of the "extreme" category	Thank you for the recommendation. The TSF consequence classification will be reviewed periodically during operations and these comments will be considered at that time. The design criteria adopted for the design of the TSF are consistent with an "extreme" consequence classification, despite the classification of "very high". A change in the consequence classification would have no impact on the selected design criteria.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1385	Chapter 3 3.5.3.5		LDN/UFN (OKane_Blake Weinrauch; Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Although the design criteria adopted for the TSF is consistent with an "Extreme" consequence classification, the applied risk should still be amended to "extreme" rather than "very high"to reflect correct classification. Please provide documentation of this amendment.	Thank you for the recommendation. BW Gold disagrees with the suggested revision and will not make the change as the difference in the classification has to do with the potenital for restoration or compensation, which is considered to be possible. As noted in the response above, the difference in classification has no bearing on the selected design criteria or design of the facility. The TSF consequence classification will be reviewed periodically during operations, and these comments can be further considered at that time.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1385	Chapter 3 3.5.3.5		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up	Statement	No	We look forward to reviewing the next iteration of the TSF consequence classification.	BW Gold acknowledges this comment.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
1386	Chapter 3 3.5.3.8		LDN/UFN		Jun 11, 2022	1	New		No	Paragraph following the "Zone X" bullet points refers to a Zone D material. What is this material?	Zone D is drain rock. Please refer to Drawing G0040 for details, which is included in the design drawing appendix of either Appendix 3-K or 3-J of the Application.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1386	Chapter 3 3.5.3.8		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	If drain rock is to be used as a construction material in the earth-rockfill dams, please include it in the list of constuction materials alongside Zone S, F, T, and C materials.	BW Gold appreciates the comment however the application is not being updated. The Zone D material type is used sparingly, and the details are contained in the appropriate design drawings.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1387	Chapter 3 3.5.3.13	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Sediment Control Ponds Grey text mixed with black text	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1388	Chapter 3 2.3		LDN/UFN		Jun 11, 2022	1	New		No	Better definition of "minimal long term environmental effects". Is this with respect to geochemical stability of the system?	The section of the application or supporting document reference appears to be an error. It is difficult to respond to the question without the context for the comment.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

1389	Chapter 3 2.3		LDN/UFN		Jun 11, 2022	1	New		No	one of the indicated objectives is safe and effective containment over the life of mine. However, tailings storage is anticipated to extend far into post-closure. Can this objective be updated?	The section of the application or supporting document reference appears to be an error. However, in the context of TSF containment, the term of the life of mine includes operations, closure and long-term post-closure. Please refer to the TSF design reports in Appendix 3-K and 3-J for clearly stated objectives.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1390	Appendix 3-J 5.5.2.2		LDN/UFN		Jun 11, 2022	1	New		No	The filter zone material states that it will require a minimum of 4 - 6 pass with a smooth drum roller. Is compactive effort required in this material?	Yes, placement of Zone F material includes a compaction specification.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1391	Appendix 3-J 5.5.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Will compactive effort reduce the hydraulic conductivity of the material and reduce its capability to remove seepage water effectively from the earth fill seal material (Zone S)?	Compaction will reduce hydraulic conductivity of a material relative to its uncompacted state. The purpose of Zone F is to prevent migration of fines from Zone S while also being more permeable than Zone S to encourage drainage. However, the dam design includes a two-stage filter (Zone F and Zone T) to effectively capture and transmit seepage water on the downstream side of Zone S.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1392	Appendix 3-J 5.7 & Appendix C3.6		LDN/UFN		Jun 11, 2022	1	New		No	Will there be assessment of tailings consolidation and associated strengths from initial deposition to final placement? This can inform upon closure placement aspects and liquefaction potential. At closure, could be used to determine the risk of liquefaction.	A summary of the tailings consolidation modelling is presented in Appendix E3 of Appendix 3-K (TSF Life of Mine Design Report). Tailings materials placed within the TSF will be evaluated periodically using sampling, laboratory testing and in-situ testing to investigate on-going consolidation processes and anticipated behavioural characteristics. The evolving knowledge base will be used to assess operational factors, such as adjustments to dam staging, liquefaction potential and to further evaluate closure aspects for the facility at the appropriate time.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1393	Appendix 3-K 3.3		LDN/UFN		Jun 11, 2022	1	New		No	Will there be testing of the tailings during startup and a testing plan in place for the tailings once full operating status has begun?	Yes, tailings will be subject to regular sampling and laboratory testing, including consideration for geotechnical and geochemical properties.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1394	Appendix 3-K 3.3		LDN/UFN		Jun 11, 2022	1	New		No	Will tailings test information be utilized to inform on possibly necessary changes to the operating process, both from a recovery tailings placement point of view?	Yes, tailings test information will be used to assess various factors, including achieve recovery, geochemical properties and factors related to settled density and on-going consolidation processes.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1395	Appendix 3-K 5.3.5		LDN/UFN		Jun 11, 2022	1	New		No	The embankment design states that Zone S will be replaced with HDPE geomembrane facing for stages 7 to 11 once PAG/NAG3 placement ceases in TSF C. How will the performance of the HDPE geomembrane be monitored and subsequently maintained if its performance is compromised?	The technical specifications for installation and quality testing during initial installation and monitoring / quality testing during staged expansion of the HDPE liners will be the primary means to verifying performance. All HDPE liners typically have some degree of installation defect, which is why design measures for seepage collection are also included in the TSF design. The service life of the TSF liners is typically defined as its half-life (i.e.. the point at which 50% of the geomembrane has degraded). The service life of the TSF HDPE liner is expected to be in excess of 400 years and even once the service life is reached, the lining system will continue to function at a decreased level of performance. Liner degradation is primarily caused by exposure to heat and ultraviolet radiation. The liners proposed for the TSF will be covered by tailings materials, creating good conditions to maximize HDPE liner service life. The tailings will also consolidate over time, eventually reaching full consolidation and will function as a relatively low-permeability soil liner above the HDPE, further limiting long-term seepage from the TSF, even as the liner degrades. Monitoring of overall facility performance will follow the monitoring and surveillance plans described in Section 9 of Appendix 3-K of the Application. These plans will be updated and incorporated into the OMS Manual, which will be progressively updated as the facility expands.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1396	Appendix 3-K 5.3.5		LDN/UFN		Jun 11, 2022	1	New		No	The embankment design states that Zone S will be replaced with HDPE geomembrane facing for stages 7 to 11 once PAG/NAG3 placement ceases in TSF C. Is there a contingency if the geomembranes performance coupled with the internal drainage collection systems is lower than expected (i.e.., release of mine waste affected fluids through the liner)?	The liners proposed for the TSF will be covered by tailings materials, creating good conditions to maximize HDPE liner service life and will function as a relatively low-permeability soil liner above the HDPE, further limiting long-term seepage from the TSF, even as the liner degrades. Tailings will form an installed contingency. Filter zones will be incorporated on the upstream face of Stages 7 to 11, such that the embankment can function with or without the HDPE liner. TSF C seepage at Main Dam C will report to TSF D, which provides for containment of the seepage, even if geomembrane and internal drainage performance is lower than expected. Downstream seepage collection measures are also incorporated with designs of the other TSF C dams (West Dam and Saddle Dam) as a mitigation, and the Environmental Control Dam (ECD) is located approximately 1 km downstream of the TSF along Davidson Creek.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1397	Appendix 3-A Mine Site	Grammar	LDN/UFN		Jun 11, 2022	1	New		No	First two sentences of the first paragraph should be re-written as one sentence with a comma separating them. The first sentence is incomplete	BW Gold appreciates the comment. However, Appendix 3-A is not being re-issued at this time.	No	LDN/UFN	BWG		Ryan	TD	Ready for Submission	RT; June 13	Ready for Publishing
1398	Appendix 3-K 5.5.5		LDN/UFN		Jun 11, 2022	1	New		No	What type of seepage system is suggested, a filter with installed drainage piping (headers and offtakes) or a french drain type system?	The internal drainage systems for the TSF dams incorporate both aggregate drain type systems as well as drainage piping to a lesser extent.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1399	Appendix 3-K 5.5.5		LDN/UFN		Jun 11, 2022	1	New		No	Why is the type of seepage system selected not included in the design at this point in the process as seepage analysis is generally completed prior to stability to ensure that a high phreatic surface does not negatively affect the landforms in question?	The level of design detail provided for the dams presented in the Application varies based on whether they need to be constructed for the start of operations or if they are required later on in mine life. The West Dam will not be constructed until approximately Year 6, and therefore was presented at a lower level of detail. Final design details for the West Dam will be presented on the Issued-for-Construction (IFC) design drawings prior to construction of the dam. Part 10.5.1 of the Health, Safety and Reclamation Code for Mines in British Columbia (the Code) describes the requirement for preparation and submission of IFC designs prior to construction.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1400	Appendix 3-K 8.2		LDN/UFN		Jun 11, 2022	1	New		No	As stated in section 8.2, "The water reclaim system will transport water from the south side of the TSF C supernatant pond to the process water tank at the process plant to be used for ore processing." Is there a geochemical maximum limit that must not be exceeded and will be monitored during the life cycle of the mine to ensure that the recycled water is suitable to be reused in the extraction process?	There is no foreseen geochemical maximum limit that would prevent the use of reclaim (recycled) water from being used for ore processing. This is based on experience from many similar processing plants operating worldwide	RT/TD to review	LDN/UFN	BWG			AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1401	Appendix 3-K 8.2		LDN/UFN		Jun 11, 2022	1	New		No	As stated in section 8.2, "The water reclaim system will transport water from the south side of the TSF C supernatant pond to the process water tank at the process plant to be used for ore processing." Is there a backup source of water in the case where the limits are exceeded?	Water can also be sourced from the Water Management Pond (WMP) or from pit dewatering sources via the Metals Water Treatment Plant (WTP). The WMP and Metals WTP will be plumbed to the Raw Water and Process Water Tanks at the processing plant in the event that water from the TSF is temporarily unavailable for any reason (e.g. reclaim system maintenance, TSF water quality, etc...).	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1402	Appendix 3-K 9.3.4		LDN/UFN		Jun 11, 2022	1	New		No	Should water quality monitoring be also instituted with respect to TARPS and QPOS?	Quantifiable Performance Objectives (QPOs) are defined by the Code as "measurable monitoring parameters that are identified and required to be maintained within predetermined limits for tailings storage facility (TSF) safety". There are no predetermined limits for water quality that directly impact TSF safety. Preliminary QPOs identified for the TSF are presented in Section 9 of Appendix 3-K. Final QPOs and associated Trigger-Action Response Plans (TARPs) will be developed for the OMS manual for geotechnical monitoring. Please see Appendix 9-E, the Mine Site Water and Discharge Monitoring and Management Plan, for a description of water quality monitoring related to the mine site.	No	LDN/UFN	KP		SCE/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1403	Appendix 3-K Table 9.1 & 9.2		LDN/UFN		Jun 11, 2022	1	New		No	Water quality monitoring should also be included for all structures, especially those designated for clean water runoff. Efficacy of flooding the PAG waste rock in the TSF areas should also be water quality monitored.	Thank you for noting this. Please see Appendix 9-E, the Mine Site Water and Discharge Monitoring and Management Plan for a description of water quality monitoring related to the mine site. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		SCE/Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1404	Appendix 3-K 9.5.3.6		LDN/UFN		Jun 11, 2022	1	New		No	Groundwater monitoring wells will be installed, but there should be surficial sampling as well. What is the frequency that these wells will be monitored?	Please see Section 7.3.4 of Appendix 9-E, the Mine Site Water and Discharge Monitoring and Management Plan for a description of the surface water and ground water quality monitoring program for the mine site.	No	LDN/UFN	KP		SCE/Dan	AT/KP	Ready for Submission	KP, June 21	Ready for Publishing

1405	Appendix 3-K 9.5.3.6		LDN/UFN		Jun 11, 2022	1	New		No	Groundwater monitoring wells will be installed, but there should be surficial sampling as well. What are the contingencies for an instance of exceedance?	Please see Appendix 9-E, the Mine Site Water and Discharge Monitoring and Management Plan for a description of the surface water and ground water quality monitoring program for the mine site. Nonconformities (i.e.., exceedances) and corrective actions are described in Section 10, and adaptive management strategies are described in Section 11 of Appendix 9-E.	No	LDN/UFN	KP		SCE/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1406	Appendix 3-L		LDN/UFN		Jun 11, 2022	1	New		No	Further investigation is required on in-situ materials below the dam structures and associated infrastructure prior to startup.	Thank you for the comment. The referenced supporting document indicates where further investigation is required for the TSF and associated water management structures prior to start-up.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1407	Chapter 3 Table 3.3-9		LDN/UFN		Jun 11, 2022	1	New		No	The open pond level is to be maintained at or below the design maximum. Is this meant to be completed passively or actively?	The post-closure water management plan includes active control of the open pit water level for the long-term following closure.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1408	Chapter 3 Table 3.3-9		LDN/UFN		Jun 11, 2022	1	New		No	If maintaining the level of the open pond is to be completed actively, is there an anticipated period of time where this would be required?	There is no anticipated time that active management of the pit water level would cease. The post-closure water management plan includes active control of the open pit water level for the long-term following closure.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1409	Chapter 3 Table 3.3-9		LDN/UFN		Jun 11, 2022	1	New		No	At what point could active management of the open pond water level cease and the pit be allowed to overfill?	The pit is not planned to fill and overflow at any time based on the current water management plan and closure strategy.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1409	Chapter 3 Table 3.3-9		LDN/UFN (OKane_Jill Ashbury; Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide supporting documentation which clearly shows the pit will not fill at any time. Please indicate what plans are in effect in the event of an extreme precipitation event or above average cumulative precipitation.	Documentation that the pit lake will not overflow at any time, based the target Post-Closure pit lake water level and open pit storage capacity is provided in the KP (2022) letter "Blackwater Gold Project - Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization", which is appended in BW Gold Ltd. 2022. "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853". The potential does not exist for water to discharge from the pit lake to the receiving environment in Post-Closure during wet (or any) conditions. As described in KP (2022), the optimized water management strategy during Post-Closure is to operate the pit lake as a groundwater sink, facilitated by maintaining the pit lake level approximately 40 m below the pit rim. There is more than 50 Mm3 of storage capacity in the open pit above this target pit lake elevation. The volume-elevation relationship displaying the storage capacity for the open pit is illustrated on Figure 1 of KP (2022). The annual water balance for the open pit/pit lake based on average climate conditions is provided in Table G.6 (KP, 2022). The total volume of water contributing to the pit lake in average climate conditions in Post-Closure is 2.8 Mm3. The annual volume of water directed to the pit during Closure to facilitate pit filling from the TSF, ECD, Upper Waste Stockpiles, and WMP is approximately 10 Mm3. The more than 50 Mm3 storage volume available above the pit lake level could not be exceeded during an extreme wet precipitation event or an entire extreme wet year. During an extreme precipitation event or large freshet, water will continue to be directed around mine facilities to the extent possible. Surplus water from the TSF would be directed for treatment at the Membrane WTP. During Operations, water that requires treatment in excess of the Metals WTP influent rate would be held in the upstream WTP ponds and pit sump. During Post-Closure, water from the ECD in excess of the Membrane WTP influent rate would be directed to the pit lake.	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
1410	Chapter 3 Table 3.3-9		LDN/UFN		Jun 11, 2022	1	New		No	Confirm that monitoring of the TSF dams will be completed as long as there is flowable material behind them. An estimate of time for tailings to completely dewater would be helpful for this discussion.	Dam safety monitoring will continue in the long-term following closure for the TSF and water management structures that are not decommissioned at closure. The schedule of monitoring and review activities may be adjusted to be less or more frequent, depending on the status of the various site facilities. A summary of the tailings consolidation modelling is presented in Appendix E3 of Appendix 3-K (TSF Life of Mine Design Report).	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1411	Chapter 3 Table 3.3-9		LDN/UFN		Jun 11, 2022	1	New		No	Is there an indication of how long it will take for water quality to reach target concentrations based on the water balance and water quality modelling?	Our response assumes this comment refers to Table 3.3-9, under the bullet "Tailings Storage Facility". The current water balance/water quality model predictions indicate water in the TSF will require treatment in the long-term (i.e.., will not meet water quality targets that may be considered in this bullet, such as BC water quality guidelines for aquatic life). Through reclamation research (Application Chapter 4), however, refinements to the closure concept may result in model predictions that indicate long-term treatment is not required to achieve water quality targets.	No	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1412	Chapter 3 3.3.4.7		LDN/UFN		Jun 11, 2022	1	New		No	A Mines Act permit is anticipated to remain indefinitely for monitoring and reporting on the TSF and Open Pit. This implies liability to Artemis in perpetuity. How is this intended to be costed for bonding?	A Mines Act permit will remain in effect for the BW Gold property until such time as all mine closure and reclamation obligations have been achieved to the satisfaction of the Chief Inspector of Mines. EMLI, not the mine owner, determines whether a Mines Act permit can be relinquished for a mine site. EMLI Interim Reclamation Security Policy (April 2022) for large mines requires a 100-year timeframe to be applied to mine sites (construction period through post-closure) for the purpose of post-closure costing and NPV calculations. In the event that post-closure activities are required to be extended beyond the 100 year timeframe, then permitting will reflect the obligations at that time to manage for residual liabilities.	RT/TD to review	LDN/UFN	ERM		Rolf	AT/KP	Ready for Submission	RT; June 29	Ready for Publishing
1413	Chapter 3 Table 3.3-10		LDN/UFN		Jun 11, 2022	1	New		No	Is there an opportunity to move any of the waste rock from the storage piles into open pit through integrated mine planning to reduce the volume of the open pit and to reduce landforms left behind at closure?	The current pit development plan does not allow for backfilling while the pit is in operation. The phased pit development, or pit wall pushbacks, are targeting consecutively deeper resources towards the bottom of the open pit limits. However, during operations, should backfilling opportunities arise that do not impact future resource development, they will be exploited in order to reduce surface footprint impacts and reduce the cost of mining operations.	No	LDN/UFN	MMTS	BWG	Marc S	AT	Ready for Submission	AT, June 19	Ready for Publishing
1414	Chapter 3 Table 3.3-11		LDN/UFN		Jun 11, 2022	1	New		No	Is the consequence classification for TSF C and TSF D anticipated to decrease as tailings dewater, or is "very high" the permanent consequence classification of the dams? Leaving very high consequence structures behind into post-closure approaches an unacceptable level of risk.	The TSF consequence classification will be reviewed periodically during operations and closure. The design criteria adopted for the design of the TSF are consistent with an "extreme" consequence classification, despite the classification of "very high". A change in the consequence classification at any time would have no impact on the selected design criteria. It is important to note that assignment of a consequence classification for the purpose of selecting certain design criteria is not an assessment of risk. A facility with a very high consequence classification can be relatively low risk and a facility with a lower consequence classification could have a higher level of risk, depending on the design of the structure and how risk is managed.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1414	Chapter 3 Table 3.3-11		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Clarification	No	It should be noted that a very high to extreme consequence classified item may still end up requiring remediation or extra effort even if the likelihood is low. The FMEA as completed shows a low risk classification which does not match the matrix result based on the very high to extreme consequence classification and a "2-Likely" likelihood of occurance. A review of the FMEA risk values is required in order to verify this issue. Please show how the conclusion was attained.	The original comment and response relates to consequence classification, and sufficient information has been provided to address the comment. It is not exactly clear what the follow-up comment relates to and what conclusion is being discussed, but it does not appear to be associated with the referenced supporting document (Chapter 3, Table 3.3-11) which is a list of impoundments and dams. The following information and explanation is offered to clarify the FMEA risk ratings. The FMEA risk assessment framework included in Appendix 3-M is not the same as the consequence/dam hazard classification framework being discussed above. Consequence/dam hazard classification is not an assessment of risk. Risk assessment requires that both the potenital consequences of failure and likelihood of failure be taken into consideration. The FMEA included in Appendix 3-M indicates that some risks are classified as 'low risk' that have the potential for major to catastrophic consequences (4 or 5 - consequence score) and have a very rare likelihood of occurence (1 - likelihood score). This results in a 'low risk' rating since the product of these two ratings (Consequence x Likelihood) results in a numerical value between 4 and 6, which aligns with the 'low risk' category in the FMEA (Table 1.3 in Appendix H of Appendix 3-M).		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing

1415	Appendix 3-M Table 6.3-2		LDN/UFN		Jun 11, 2022	1	New		No	With the understanding that Business (Disruption) and Damage Loss were included/broadened in the consequence classification, why was the CDA Consequence Classification not used more fully to inform on the consequence of failure? Is this not reinventing the wheel? Especially since this is for dam/TSF storage.	The purpose of the High Level Risk Assessment was to insert an additional screening step between the critical flaw assessment and the multipel accounts analysis. The critial flaw assessment screening out some candidates, but still left a significant number; too many to conduct an MAA on. Therefore, a simple 'high-level' risk assessment was developed to be able to assess risk amongst the remaining candidates and therefore select the lower-risk candidates on a comparative basis. In order to keep the risk assessment simple (high-level), consequence and likelihood tables were prepared to run the remaining candidates through. The consequence matrix that was developed was presented to the working group, as were the results, with feedback provided. It was deemed adequate for the purpose when the AA was developed in 2015.	No	LDN/UFN	KP		Greg	RT	Ready for Submission	KP, June 30	Ready for Publishing
1416	Appendix 3-M Table 6.3-3 Candidate 6 vs Candidate 23		LDN/UFN		Jun 11, 2022	1	New		No	Further clarification of why the tailings breach scenario produces a lower likelihood of failure than a no tailings beach scenario is required. In the event of a failure, tailing water and tailings sand will be considered to be a single mass. All of the water and a percentage of the tailings will flow in the event of a breach. The very definition of breach means that the materials stored behind the dam will breach containment and inundate the area downstream. In the case of Candidate 23, the tailings will be breached in a similar fashion to the dam causing the release of the fluids. Is this a stability safety measure, whereby the phreatic surface within the dam will be lower due to the longer flow path that water will have to take prior to seeping through the dam structure? If that is the case, then the seepage drainage within the dam without a beach should be designed differently to ensure that the phreatic surface does not create stability issues. If this is a wave run-up issue, then a difference in freeboard between the two scenarios should be made to ensure that the likelihood of failure is as low as reasonably required. The likelihood should be the same regardless of beach or no beach.	The difference in likelihood due to the beach can be found in the description for Candidate 6. That is, with no beach, should embankment deformation following a triggering event (such as a seismic event) exceed the freeboard, water could overtop the dam and errode the structure, resulting in a dam breach. With Candidate 23, there is a beach between the dam and the pond. Should the same embankment deformation occur due to a triggering event, the tailings beach could act as a barrier to the TSF pond from overtopping the embankment, erroding the structure and creating a dam breach. The dam at the Cadia Mine in Austrailia is a good example of crest slumping but no overtopping of the pond; thus, no release of water. The tailings act as an additonal barrier to the likihood of a flood wave due to a dam breach.	No	LDN/UFN	KP		Greg	RT	Ready for Submission	KP, June 30	Ready for Publishing
1416	Appendix 3-M Table 6.3-3 Candidate 6 vs Candidate 23		LDN/UFN (OKane_Marty Sangster)		Jul 22, 2022	2	Follow up	Clarification	No	Thank you for this response; however, it does not address the original comment / question. I will attempt to re-ask the question in simpler terms: In the case of all the configurations of a breach the consequence is the same, "Extreme" ranked structure as per the CDA Guidelines. Why does a tailings beach reduce the likelihood of failure?	The CDA Dam Safety Guidelines, which provide guidance to design engineers to develop an appropriate consequence classification for a dam, are not the same as the high-level risk assessment (HLRA) that was devloped to support the MAA (Section 6.3 of Appendix 3-M). Tables 6.3-1 and 6.3-2 (Appendix 3-M) present the likelihood and consequence matrixes to be used in the HLRA. As noted in Section 6.3 (Appendix 3-M), the purpose of the HLRA was to compare the relative risks for similar candidates, and to identify the best candidate (i.e. lowest risk) for the different tailings technologies to carry forward into the more detailed MAA. The two technology catorgories were slurry tailings (including thickened-slurry and paste candidates), and filtered tailings. Thus, the HLRA results for the first grouping (which included Candidate 23) are not compared to the results of the second grouping (which included Candidate 6). See tables 6.3.-4 to 6.3-6 for the HLRA results comparisons. The response to the Round 1 comment stands, and is correct as described. However, based on the Round 2 follow-up comment, and the title of this comment, it appears that the reviewer is trying to compare the likelihood of the safety category in the HLRA for two different tailings technlogies, which the HLRA was not set-up to do.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1416	Appendix 3-M Table 6.3-3 Candidate 6 vs Candidate 23		LDN/UFN (OKane_Marty Sangster)		Sep 01, 2022	3	Follow Up	Recommendation	No	The group can likely perform the FMEA for this topic, and it will likely drive further analysis later. At the very least a description of what method they used beyond the CDA guidelines to determine the consequence classification will be required.	BW Gold acknowledges the comment.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Sep 13	Ready for Publishing
1416	Appendix 3-M Table 6.3-3 Candidate 6 vs Candidate 23		LDN/UFN (OKane_Marty Sangster)		Oct 06, 2022	4	Follow Up	Recommendation	No	Clarification of internal FMEA should be characterized as being only for the purposes of options analyses. The overarching consequence as determined by the CDA guidelines methodology and template must be stated properly to avoid confusion.	BW Gold acknowledges the comment. The overarching TSF consequence classification for the design submitted with the Permit Application, determined following CDA guidelines, is presented in Appendix D1 of Appendix 3-K of the Application.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
1417	Chapter 3 3.4.3.5		LDN/UFN		Jun 11, 2022	1	New		No	There is an opportunity to leverage the INAP "Building Better Mine Rock Stockpiles" guidance when constructing the LGO Stockpile to limit the production of ML/ARD produced until the material is processed. As previously presented, the guidance indicates bottom up construction using small lift heights with advective cut off layers. If appropriate PSDs can be achieved, it is possible that the LGO material can be used to produce these layers. This method has been proven to significantly reduce the production of stored acidity in MRS. Constructing the LGO stockpile this way also reduces residual risk in the event that a temporary closure scenario occurs, and precludes the need for material from the LGO stockpile to be moved into the Open Pit, reducing startup costs following temporary closure	The opportunity to leverage INAP "Building Better Mine Rock Stockpiles" was discussed with EMLI and Indigenous groups on Thursday June 17th, 2022. Several mitigation measures were discussed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. With respect to lift height, BW Gold acknowledges the opportunity to lower the lift height to reduce ML/ARD, but also notes there are both economic and physical limits that dictate the ultimate lift height selected. A review by BW Gold indicates dozing costs start to increase as the lift height is reduced below 5m and increase significantly below 3m. Further reduction in lift height is restricted by the physical characteristics of the run of mine rock. Lift heights of below 1m would be difficult to achieve, much less the 0.30m suggested in the meeting. These lift heights would also have significant cost implications and impact the economic viability of the stockpile. However, BW Gold will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BW Gold recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason, BW Gold has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners, to ensure capture and treatment of both surface run-off	No	LDN/UFN	BWG		Alastair	TD	Ready for Submission	AT, June 25	Ready for Publishing
1418	Chapter 3 3.5.1.6		LDN/UFN		Jun 11, 2022	1	New		No	Has any optimization work been done to see if, given the staged nature of the open pit, there is an opportunity to store waste rock (and / or PAG material) in the open pit to reduce the water volume at closure and to reduce surficial disturbance and storage post-closure?	The current pit development plan does not allow for backfilling while the pit is in operations. The phased pit development, or pit wall pushbacks, are targeting consecutively deeper resources towards the bottom of the open pit limits. During operations, should backfilling opportunities arise that do not impact future resource development, they will be exploited in order to reduce surface footprint impacts and reduce the cost of mining operations.	No	LDN/UFN	MMTS	BWG	Marc S	AT	Ready for Submission	AT, June 19	Ready for Publishing
1419	Appendix 3-M 7.1.1.4 7.1.2.4 7.1.3.4 7.1.4.4 etc...		LDN/UFN		Jun 11, 2022	1	New		No	In all cases a water management system is required into perpetuity. Is bonding going to account for this? Would a more walk away closure plan be a safer, lower risk, and more cost effective means to close the site?	Since the completion of the Alternatives Assessment (Appendix 3-M), BW Gold has looked to optimize water management through the closure and post-closure phases to improve water quality predictions (and associated monitoring requirements; see response to comment #581).	No	LDN/UFN	KP		Tonia	RT	Ready for Submission	KP, June 24	Ready for Publishing
1420	Appendix 3-M 7.1.1.4 7.1.2.4 7.1.3.4 7.1.4.4 etc...		LDN/UFN		Jun 11, 2022	1	New		No	Would a more "walk away" closure plan be a safer, lower risk, and more cost effective means to close the site?	Since the completion of the Alternatives Assessment (Appendix 3-M), BW Gold has looked to optimize water management through the closure and post-closure phases to improve water quality predictions (and associated monitoring requirements; see response to comment #581).	No	LDN/UFN	KP		Tonia	RT	Ready for Submission	KP, June 24	Ready for Publishing

1421	Appendix 3-M 7.1.1.4 7.1.2.4 7.1.3.4 7.1.4.4 etc...		LDN/UFN		Jun 11, 2022	1	New		No	Will the TSF be remediated in such a fashion working towards a mine waste structure vs active care and maintenance into perpetuity?	The overall intent of the reclamation prescriptions for the Tailings Storage Facility (TSF) is to optimize geotechnical stability (i.e.., minimize extent of ponded zones) while minimizing the potential for acid rock drainage and metal leaching. Section 4.7.4 of Chapter 4 (Reclamation and Closure Plan) provides a detailed approach to the reclamation of the TSF.	RT/TD to review	LDN/UFN	KP		Tonia	RT	Ready for Submission	KP, June 24	Ready for Publishing
1422	Chapter 3 3.5.3.3		LDN/UFN		Jun 11, 2022	1	New		No	Candidate 1 scored highest for all accounts except Physical Stability, however, this is the Candidate that also requires monitoring and maintenance of a dam in perpetuity. While it is understood that additional measures can be implemented to address physical stability, including ongoing monitoring, the risk of tailings breach captured in the Alternatives Assessment process seems to be ranked anomalously low. The ranking put forth in the AA does not align with the risk profile of LDN and UFN, given the catastrophic influence a breach would have on the environment. The requirement for the TSFs to be managed in perpetuity due to subaqueous tailings deposition means that this risk will be around for more than three generations, which is an important metric.	Noted. BW Gold understands that LDN_UFN have proposed to have a risk workshop about the Blackwater Project and looks forwad to discussing LDN_UFN's perspective with respect to risk. As for the conclusions of the AA, BW Gold believes the methodology was sound, included substantive consultation, including with the LDN_UFN and their representatives, and presentated results in a transparent manner as a tool to select the best possible candidate.	RT/TD to review	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1423	Chapter 3 3.5.3.3		LDN/UFN		Jun 11, 2022	1	New		No	Candidate 22 has the highest physical stability score of the alternatives assessed and meets many of the available best practices for managing mine waste. The geochemical challenges of unsaturated PAG storage can be addressed using best practices such as the INAP guidance document for "building better mine rock stockpiles", which includes incorporation of advective cutoff layers and progressive reclamation to limit oxygen ingress and reduce the potential for development of stored acidity. This option should be re-ranked given available technologies, given the significant decrease in risk associated with removal of a TSF from the mine plan, and therefore the risk of catastrophic inundation of Tatlekuz Lake in the event of a breach	Noted. BW Gold acknowleges that there is a growning body of evidence to support alternatives to managing PAG/ML materails below water and/or in a saturated state. Candidate 22 did achive the highest score for physical stability, but the methods for preventing the onset of ARD/ML from some waste materials will require significant technical studies to have the same confidence that comes from managing these materials either sub-aqueously and/or in a saturated state. It's important to note that there are still a number of dams associated with Candidate 22, and similar water management requirements that will last in the long-term. BW Gold has appreciated the ideas that LDN_UFN have put forward through their technical team regarding options for preventing the onsite of ARD/ML using covers, and looks forward to further discussion on the topic and evaluate the potential benefits	RT/TD to review	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1424	Chapter 3 3.5.3.3 Candidate 1, Technical Account		LDN/UFN		Jun 11, 2022	1	New		No	It is unclear how long-term monitoring and maintenance is minimized with Candidate 1, as the Mine Permit will be in place permanently to accommodate monitoring and maintenance of the dam structures for the TSFs. Can this be clarified?	The rational for lower long -term monitoring and maintenance for Candidate 1 is that there is only one facility (managing both tailings and waste rock together). When one overlaps multiple facilities and/or waste management approaches that are novel and not technically supported by the same body of evidence as sub-aqueous and/or saturated storage, the propsect of more monitoring is likely.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 30	Ready for Publishing

1424	Chapter 3 3.5.3.3 Candidate 1, Technical Account		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	please provide documentation of this justification.	Table 7.2-3 (Appendix 3-M) summarizes the Technical Characterization Criteria developed for the Multiple Accounts Analysis (MAA). Under the Closure sub-account, six (6) indicators were developed, including 'Closure concept - long-term maintenance and monitoring'. The descriptions for each of Candidates 1, 7, 10 & 22 are included in this table, and are further expanded in the MAA ledger for the Technical Account in Appendix F of Appendix 3-M. Table 8.2-1 presents the parameters and units, if applicable, to each indicator. The 'Closure concept - long-term maintenance and monitoring' indicator is defined as a qualitative value. Section 9.5 (Appendix 3-M) further expands on the rational for reduced "...long-term monitoring and maintenance costs as only the TSF runoff to be captured (and anticipated quality of water will improve with saturation of PAG/NAG3 materials)'. A monitoring and maintenance program was not developed for each of the four candidates included in the MAA, as it was not needed to use this indicator in the MAA. If monitoring and maintenance is required at multiple locations compared to only one location, it follows that the program will be more extensive, and thus cost more. Furthermore, if technologies are chosen for a given candidate that have a shorter duration and smaller body of evidence to manage PAG/NAG3 materials effectively, it follows that there is an increased risk that more monitoring and maintenance may be required compared to a candidate that utilizes a long-term and expansive industry good practice to successfully manage PAG/NAG3 materials.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1425	Chapter 3 3.5.3.3 Candidate 1, Environmental Account		LDN/UFN		Jun 11, 2022	1	New		No	Submergence of PAG rock is not the only BAT for management of ML/ARD risk. The INAP guidance around building better mine rock stockpiles indicates that there are effective ways to achieve this even with waste rock that is more reactive than the rock at Blackwater, with minimal water quality impacts, without submerging the material. Submergence in the open pit is also a more preferable alternative from a risk standpoint than behind a dam structure, which requires long term monitoring and maintenance while the tailings material consolidates.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time.	No	LDN/UFN	KP			AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1426	Chapter 3 3.5.5		LDN/UFN		Jun 11, 2022	1	New		No	Modelling should be completed to optimize lift height and thickness of advective layer cutoff if the INAP guidance is followed for the LGO stockpile construction	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	BWG	KP		TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1427	Chapter 3 3.5.5.13		LDN/UFN		Jun 11, 2022	1	New		Yes	Recommend installing oxygen sensors during construction to monitor air flow into the LGO stockpile as a way of measuring potential for sulfide oxidation reactions to take place.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1428	Appendix 3-V2 Section 5 (second last bullet in first list)		LDN/UFN		Jun 11, 2022	1	New		No	Confirm that runoff from upgradient of the open pit is being diverted around the open pit. Previous text indicated that runoff from upgradient would not be diverted	The catchment area upgradient of the south pit rim is small. Any diversion of runoff from upgradient will be a site-fit option during operations as the pit limit expands.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1429	Appendix 3K 5.2.5		LDN/UFN		Jun 11, 2022	1	New		No	All tailings are expected to consolidate fully within 10 years of placement; if so, can the need for a pond behind the dam be removed, and the dam reclassified as a waste containment structure so it can be removed as a liability per the CDA regulations? This would greatly reduce residual risk, as well as long-term liability for Artemis	Removing the pond from the TSF following closure would require adjustments to the closure and reclamation plan. The closure plan balances geochemical and geotechnical risks. A dry or partial-dry closure is generally preferrable from a geotechnical perspective and could likely be achieved with good planning. However, a dry closure plan would require careful consideration from a geochemical perspective.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1430	Appendix 3K 5.4.3		LDN/UFN		Jun 11, 2022	1	New		No	Has geophysics been employed to analyze the presence of glaciolacustrine material along the stream bed where drilling is not an option?	Yes, surface geophysics was used in several locations as indicated in Appendices 3-L, 3-V3 and 3-V4. There are several geophysical seismic lines crossing Davidson Creek. Surface seismic refraction along Main Dam C is planned prior to construction. Geophysics cannot be used alone to tell the difference in deposition (till vs glaciofluvial vs glaciolacustrine). It can be used to infer differences in density and stiffness (seismic velocity) and grain size/moisture retention (resistivity). It can be difficult to detect glaciolacustrine material with surface geophysics if it is overlain by a higher velocity layer, such as glacial till, due to the higher velocity layer masking the lower velocity layer. Drilling and test pitting are generally required to further characterize the foundation stratigraphy and inform geophysical data interpretation.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1431	Appendix 3K 10.2		LDN/UFN		Jun 11, 2022	1	New		No	Best practice is to not leave liquefiable material behind dam structures at closure. While this option does limit ML/ARD potential of the PAG waste rock, there are alternate disposal practices (i.e.., advective cutoff barriers in above-grade stockpiles) that have been proven to restrict ML/ARD production and result in much lower residual risk	Thank you for noting this. BW Gold will not be making further edits to the Application at this time.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1432	Appendix 3K Table 11.1		LDN/UFN		Jun 11, 2022	1	New		No	Risk rankings are inconsistent with the LDN/UFN risk profile. Generally, if all risks are low to very low, the "right" question is not being asked in the FMEA. Would expect to see some medium to high risks that can be mitigated as an outcome of the FMEA.	BW Gold acknowledges this comment.	No	LDN/UFN	BWG			TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1432	Appendix 3K Table 11.1		LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please address in the LDN/UFN FMEA.	BW Gold appreciates LDN/UFN interest in conducting an FMEA using the Nations' risk assessment framework. An FMEA has already been completed for the project and BW Gold is of the view that an additional FMEA is unwarranted and falls outside the scope of the Joint Application review.		LDN/UFN	BWG	KP	Alastair/Klaus	RT		RT; aug 16	Ready for Publishing
1433	Appendix 3-N 3.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Further information required on the meltwater corridor below the northern end of the LGO. How much risk does the corridor pose?	This northeast-east trending glaciofluvial unit was inferred based on the interpretation of surficial geology from the deglaciation model map. Additional geotechnical investigation by test pitting and additional drilling will be completed prior to construction to investigate the nature, extent and significance of this deposit. Investigations are planned to commence in summer 2022. LGO Stockpile design details will be adjusted, if required, based on the findings of the investigation.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1434	Appendix 3-N 3.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Is there a risk that the meltwater channel could be a release point for contaminated water (i.e.., ARD/ML) or is this a weak layer that could affect the stability of the dump?	Additional geotechnical investigation by test pitting and additional drilling will be completed prior to construction to investigate the nature, extent, and significance of this deposit. Investigations are planned to commence in summer 2022. LGO Stockpile design details will be adjusted, if required, based on the findings of the investigation.	RT/TD to review	LDN/UFN	KP	Lorax	Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1435	Appendix 3-N 5		LDN/UFN		Jun 11, 2022	1	New		No	Depending on the potential for producing ARD/ML, the configuration can be easily and cheaply adjusted during placement to minimize the risk of creation of said contamination (i.e.., lower permeability lifts at regular lift thicknesses to minimize oxygen ingress). This is dependent on the effects of short to long term placement of materials in the LGO that could affect future recovery of ore within the landform. Further testing is required in order to determine the effects of either scenario.	BW Gold acknowledges this comment.	No	LDN/UFN	BWG	KP		TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1436	Appendix 3-N 5.4.2		LDN/UFN		Jun 11, 2022	1	New		No	In order to minimize the risk of contamination of the in-situ materials below the LGO stockpile, the geosynthetic liner system may be recommended for the entirety of the base below the LGO stockpile. This is the only stockpile that this recommendation is necessary as this is the only dump that is expected to be removed at a future date.	BW Gold acknowledges this comment.	No	LDN/UFN	BWG	KP		TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1437	Appendix 3-N Table 9.2		LDN/UFN		Jun 11, 2022	1	New		No	Monitoring or investigation of effects to ore processing within LGO should be undertaken post placement to ensure that proper techniques are used at time of rehandling and processing.	BW Gold acknowledges this comment.	No	LDN/UFN	BWG	KP		TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1438	Appendix 3-B 4.5.1	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Different coloured texts used (grey and black)	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 20	Ready for Publishing
1439	Appendix 3-C 2.2	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Space required between "2021" and "geotechnical"	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 20	Ready for Publishing

1440	Appendix 3-C Figure 5.8	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Missing reference directly above figure	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 20	Ready for Publishing
1441	Appendix 3-C 6.1		LDN/UFN		Jun 11, 2022	1	New		No	The LGO stockpile will be placed on a "Low permeability base". Will this consist of natural ground, or is a liner/barrier system being considered to stop any ML/ARD seepage into underlying soils and groundwater? Ore will be stockpiled from Y1 to Y23, which is a long term risk for the LoM	Please refer to Appendix 3-N "Stockpiles Geotechnical and Water Management Design Report", April 19, 2022, Section 5.0 for design details.	No	LDN/UFN	MMTS		Marc S	AT	Ready for Submission	AT, June 19	Ready for Publishing
1442	Appendix 3-C Figure 6-1 through 6.4		LDN/UFN		Jun 11, 2022	1	New		No	Benching for the LGO stockpile suggests lifts in the range of 20m. Reducing lift thickness may mitigate ARD/ML production through limiting oxygen and water ingress. Were alternate designs for the LGO proposed?	The opportunity to leverage INAP "Building Better Mine Rock Stockpiles" was discussed with EMLI and Indigenous groups on Thursday June 17th, 2022. Several mitigation measures were discussed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. With respect to lift height, BW Gold acknowledges the opportunity to lower the lift height to reduce ML/ARD, but also notes there are both economic and physical limits that dictate the ultimate lift height selected. A review by BW Gold indicates dozing costs start to increase as the lift height is reduced below 5m and increase significantly below 3m. Further reduction in lift height is restricted by the physical characteristics of the run of mine rock. Lift heights of below 1m would be difficult to achieve, much less the 0.30m suggested in the meeting. These lift heights would also have significant cost implications and impact the economic viability of the stockpile. However, BW Gold will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BW Gold recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason, BW Gold has committed to implementing significant mitigation measures including a water management system incorporating perimeter drainage and base liners to ensure capture and treatment of both surface run-off and stockpile seepage. Further, bonding for the stockpile will be provided for as part of BW Gold's RLCE.	No	LDN/UFN	MMTS		Marc S	AT	Ready for Submission	AT, June 19	Ready for Publishing
1443	Appendix 3-H Exec. Summary		LDN/UFN		Jun 11, 2022	1	New		No	Different coloured texts used (grey and black)	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1444	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN		Jun 11, 2022	1	New		No	The runout of the TS-6 and TS-3 stockpile terminate into TSF D and TSF C respectively. Is there a risk of this failure progressively causing a wave front in the TSF's which could overtop/breach the TSF?	No, the associated stockpiles are relatively small, positioned well away from the TSF dams, and failure in the manner described is not considered a credible potential failure mode for the TSF.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1444	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow up	Information Requirement	No	Please provide documentation that this risk has been analyzed.	BW Gold appreciates the comment; however, failure in the manner described is not considered a credible potential failure mode for the TSF as stated above. Stability analyses were performed for the topsoil stockpiles and are included in Section 4 and Appendix C4 of Appendix 3-N (Stockpiles Geotechnical and Water Management Design Report) of the Application. This potential failure mode can be revisited and discussed in future periodic risk assessments of the facility.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1444	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow up	information requirement	No	This will require already completed analyses to be produced or further analyses to be completed providing the runout distances of each of the dumps.	The Ministry of Energy, Mines, and Low Carbon Innovation (EMLI) Major Mines Office also provided two comments, IDs #322 and #336, relating to Appendix 3-X3. Responses were prepared for these comments that included preparation of additional information summarizing the approximate runout distance from the crest of each stockpile. Please see attachment "R2_EMLI Geotech Comment IDs 322 336.pdf" for the estimated runout distances and associated discussion.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
1445	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN		Jun 11, 2022	1	New		No	The runout of the TS-6 and TS-3 stockpile terminate into TSF D and TSF C respectively. Could the failures of the dumps block the flow of the Davidson Creek flow path which then could fail and progressively breach the downstream dams (TSF C and D)?	No, the associated stockpiles are relatively small, positioned well away from the creeks and TSF dams, and failure in the manner described is not considered a credible potential failure mode for the TSF.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1445	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN (OKane_Marty Sangster)		Jul 22, 2022	2	Follow up	Information Requirement	No	Please provide documentation that this risk has been analyzed.	BW Gold appreciates the comment; however, failure in the manner described is not considered a credible potential failure mode for the TSF as stated above. Stability analyses were performed for the topsoil stockpiles and are included in Section 4 and Appendix C4 of Appendix 3-N (Stockpiles Geotechnical and Water Management Design Report) of the Application. This potential failure mode can be revisited and discussed in future periodic risk assessments of the facility.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1445	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN (OKane_Marty Sangster)		Sep 01, 2022	3	Follow Up	information requirement	No	This will require already completed analyses to be produced or further analyses to be completed providing the runout distances of each of the dumps.	The Ministry of Energy, Mines, and Low Carbon Innovation (EMLI) Major Mines Office also provided two comments, IDs #322 and #336, relating to Appendix 3-X3. Responses were prepared for these comments that included preparation of additional information summarizing the approximate runout distance from the crest of each stockpile. Please see attachment "R2_EMLI Geotech Comment IDs 322 336.pdf" for the estimated runout distances and associated discussion.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 9	Ready for Publishing
1445	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN (OKane_Marty Sangster)		Oct 06, 2022	4	Follow Up	information requirement	No	Respectfully, the review comment remains as communicated previously. Any risk to another structure must be evaluated, analyzed and documented to not be issue, or otherwise.	The previous response included details of analyses providing the runout distances of each of the dumps as requested in the Round 3 review comment. The preceeding Round 1 and 2 comment responses addressed earlier iterations of the comment. No additional information is forthcoming at this time.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Oct26	Ready for Publishing
1445	Appendix 3-X3 Section 3.4 Section 3.8		LDN/UFN (OKane_Marty Sangster)		Nov 17, 2022	5	Follow Up	information requirement	No	Response referencing "R2_EMLI Geotech Comment 322 336.pdf" was not previously received; reviewer satisfied comment has been addressed	Thank you for the comment and confirming that the comment has been closed.		LDN/UFN	KP					RT; nov 21	Ready for Publishing
1446	Appendix 3-H Table 3.1		LDN/UFN		Jun 11, 2022	1	New		No	Why is a mat foundation needed for an ore stockpile, rather than placement on ground?	Mat foundations are fairly typical for coarse ore stockpiles at processing plants. The main objective of using mat foundations is to control the potential for differential settlement below the coarse ore stockpile.	No	LDN/UFN	KP		Danial	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1447	Appendix 3-H Table 3.1		LDN/UFN		Jun 11, 2022	1	New		No	Would a 900 kPa load on a foundation not drastically exceed the maximum loading capacity of any consolidated in situ soil, resulting in extreme settlement and foundation cracking?	The main objective of using mat foundations is to control the differential settlement, not the total settlement. Differential settlement is the cause of foundation cracking.	No	LDN/UFN	KP		Danial	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1448	Appendix 3-H General		LDN/UFN		Jun 11, 2022	1	New		No	There is no mention of how will these structural foundations will be remediated post closure of the mine. How will the contaminated plant sites and foundations be remediated?	Please refer to *Section 4.7.2 Structures and Equipment* in Chapter 4 - Reclamation and Closure Plan.	No	LDN/UFN	BWG			AT/KP	Ready for Submission	TD, Jun 28	Ready for Publishing
1449	Appendix 3-J 3.1 and 3.3.1 and 3.4.1 and 4.2.3.1	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Different coloured texts used (grey and black)	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1450	Appendix 3-J 4.5.1		LDN/UFN		Jun 11, 2022	1	New		No	Water generated from pit dewatering activities will be treated and directed the WMP provide clarification	Treated water directed to the WMP is covered as an inflow to the WMP in the following statement in Section 4.5.1 of Appendix 3-J, "...and water pumped from other collection points and water management systems."	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1451	Appendix 3-J 5.4.1		LDN/UFN		Jun 11, 2022	1	New		No	Refers to Zone S material twice for both Glacial Till and Impervious Earthfill Seal Zone. Is this a typo?	Both the cut-off trench backfill and earthfill seal zone of the dam will comprise Zone S material.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

1452	Appendix 3-J Appendix C		LDN/UFN		Jun 11, 2022	1	New		No	Were piping failures considered to be a risk at this site?	The potential for internal erosion and piping was considered during development of the designs of the various facilities discussed in the referenced document.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1452	Appendix 3-J Appendix C		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your response, however, the original question has not been answered. Provide documentation of considerations made for internal erosion of piping, and show how piping failure does or does not constitute a risk	The potential for internal erosion and piping was considered to be a risk at this site for water retaining structures. The designs of the various facilities discussed in the referenced report vary in approach to mitigating the potential for piping, but the approaches generally include the use of compatible engineered fill materials and/or geombrane liner for controlling internal drainage. One mitigation for internal erosion and piping is the use of filter zones (Zones F and T) downstream of the earthfill seal zone (Zone S) in the TSF dams and other internal drainage features (e.g. chimney drain, foundation drains, etc..) using the same materials. These measures are discussed in several sections, including Section 5, of the referenced report (Appendix 3-J: TSF Stage 1 Detailed Design Report).		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1453	Appendix 3-J Appendix C		LDN/UFN		Jun 11, 2022	1	New		No	Was leakage through the geomembrane liner via holes or wrinkles estimated for the IECD structure?	The design for the IECD does not incorporate a geomembrane liner.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1453	Appendix 3-J Appendix C		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up		No	Section 8.1.1 of Appendix 3-J states the following: "Geosynthetics, including geotextiles and geomembranes are required throughout the TSF. The following TSF Stage 1 components are designed with the use of geosynthetics: • Water Management Pond • Longitudinal Drain • Sediment Control Pond • Interim Environmental Control Dam Provide clarification	The design of the IECD incorporates a non-woven geotextile as shown on Drawing C1411 in Appendix D. The design does not incorporate a geomembrane liner.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1453	Appendix 3-J Appendix C		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		No	Was leakage through the geotextile liner estimated for the IECD structure?	Seepage analyses were performed for the IECD structure to evaluate seepage flow paths through the IECD embankment and foundation under both normal operating and maximum water levels. The results are presented in Appendix C4 of Appendix 3-J of the Application. The results indicate that the expected seepage flow path extends from the water surface on the upstream face of the dam to the upstream toe of the foundation drain blanket or chimney drain. Head losses are observed through the Zone S dam material upstream of the foundation and chimney drains. The IECD pumpback system to the TSF was designed to maintain the pond at a minimum operating water level of approximately 1205 masl, which is equivalent to a normal pond depth of less than 2 m. Seepage rates from the IECD pond to the seepage collection sump are predicted to be very low (< 1 L/s). Seepage collection in the drains will discharge into a downstream collection sump for pumpback to the IECD pond.		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, Sep 15	Ready for Publishing
1454	Appendix 3-Z		LDN/UFN		Jun 11, 2022	1	New		No	Stability of the dam cross-section configuration looks good, but further drilling of the foundation below the structures is required prior to construction.	Thank you for the comment. The referenced supporting document along with Appendix 3-L of the Application indicates where further investigation is required during progressive development of the TSF, stockpiles and associated water management structures.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1455	Appendix 3-K 7.6		LDN/UFN		Jun 11, 2022	1	New		No	Were adjustments for climate change incorporated into the site wide water balance?	Please refer to Appendix 5-B of the Application for details related to water balance modelling, including how climate change was considered in the modelling (Section 8 of Appendix 5-B).	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1456	Appendix 3-K Table 11.1 Risk ID 12		LDN/UFN		Jun 11, 2022	1	New		No	Different coloured texts used (grey and black)	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1457	Appendix 3-L 7.2.3		LDN/UFN		Jun 11, 2022	1	New		No	Appendix 3-K mentioned difficulting drilling beneath the Saddle Dam and called for recommendations for sonic drilling. This section characterizes the entire geotechnical and hydrogeological conditions beneath the side from 4 test pits and 2 drill holes. Sonic drilling and a more in depth characterization of the Saddle Dam foundation should be completed prior to any work taking place.	Thank you for the comment. The referenced supporting document (Appendix 3-L) indicates that further investigation is required prior to final design and construction of the Saddle Dam.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1457	Appendix 3-L 7.2.3		LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide documentation with respect to planning a drilling program / geotechnical investigation program to identify potential risks involved with construction of the Saddle Dam.	No additional specifications are currently available for the investigations planned at the Saddle Dam. As stated in Appendix 3-K (TSF Life of Mine Design Report), additional follow up drilling and in-situ testing investigations are recommended prior to and during construction of the Saddle Dam. The Saddle Dam is planned to be required by approximately Year 12 of mine operations. Further investigations at the site of this dam are planned to be undertaken between approximately Years 4 and 9 of mine operations to support the planned schedule for progressive TSF construction. Drillhole locations and in-situ testing requirements will be developed as part of the second five-year investigation plan, with planning for that phase beginning during Year 3 of operations.		LDN/UFN	KP		Dan/Joseph	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
1458	Appendix 3-M Closure (all candidates)		LDN/UFN		Jun 11, 2022	1	New		No	Was decommisioning the TSF as a landform ever considered to be an option to avoid long term treatment / monitoring / classification as a dam structure?	The overall intent of the reclamation prescriptions for the Tailings Storage Facility (TSF) is to optimize geotechnical stability (i.e.., minimize extent of ponded zones) while minimizing the potential for acid rock drainage and metal leaching. Section 4.7.4 of Chapter 4 (Reclamation and Closure Plan) provides a detailed approach to the reclamation of the TSF. The embankments will be classified as dams as long as they retain tailings in the upstream impoundments. Owing to the ML/ARD potential of the tailings and waste rock store behind the dam, BW Gold does not see an opportunity to decommission the TSF such that it would no longer retain these products.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 29	Ready for Publishing
1459	Appendix 3-M 7.2.1		LDN/UFN		Jun 11, 2022	1	New		No	Bullet point #4. Font size issue	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 26	Ready for Publishing
1460	Appendix 3-N 5.1		LDN/UFN		Jun 11, 2022	1	New		No	Were passive treatment methods (aerobic wetlands, SRB's, etc...) considered for ARD neutilization instead of lime treatment in order to reduce active treatment costs and increase environmentally holistic mining methods?	Passive treatment methods have been considered in the past for the Blackwater Project, in particular for closure of the site. During the EA review phase, metals and membrane water treatment technologies were proposed, and ulitimately replaced previously suggested passive treatment technologies. These active technologies are part of the current mine design in the Application. Passive treatment technologies for managing the contact water signatures from the stockpiles may be future opportunities that can be considered, but BW Gold has chosen to include the active treatment technologies for managing of these stockpile waters at this time.	No	LDN/UFN	KP			RT	Ready for Submission	KP, June 30	Ready for Publishing
1460	Appendix 3-N 5.1		LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Is evaluation of these passive treatment approaches included in Artemis' R&D plans for the project?	Yes. Under proposed Reclamation Reseach (Section 4.2.5 of the Application), Section 4.2.5.3 (Use of Wetlands to Treat Water) describes proposed research of wetlands to treat water in post-closure.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing

1460	Appendix 3-N 5.1		LDN/UFN (OKane_Mike O'Kane)		Sep 06, 2022	3			Yes	The reviwer's position is that ultimately, results, or outcomes, from research, will result in decisions in respect of a 'final' design for water treatment during closure. Furthermore, decisions are required in respect to the non-technical and technical objectives, and therefore the design of the research program itself. Furthermore, risk-based decisions in respect to closure, of which any treatment system is key component thereof, is foundational to developing Free, Prior, and Informed Consent (FPIC). We recommend that the proponent consider that decisions on research program intent, objectives, and cdesign are in fact 'risk-based' decisions, and that the research is required not to address 'uncertainty', but rather to address risk, and identify opportunity. Risk-based decisions arise when there is some information available, and some understanding of the outcome; this represents the case in respect of the water treatment. Risk can be managed; uncertainty is uncontrollable. Utilizing a risk-based approach for the planning, design, and execution of the research, well ahead of their implementation, will allow for FPIC to be realized as it will allow for common understanding for probability (likelihood) ranges, consequence effect ranges, and timeframe ranges, and ultimately the risk profile for TSF closure. We recommend the Failure Modes and Effects Analysis (FMEA) approach, as mitigations undertaken can be prioritized to address particular failure modes (FMs), probability of the FMs, consequence effects of the FMs, or both, and over agreed to and specified time frames. In addition, FMs can be systematically addressed and the FMEA re-visited as information / data is developed to evaluate whether risk has been reduced to the acceptable level of residual risk, or further work is required. This process naturally evolves into framing an adaptive management approach in respect to TSF closure. This will require consultation with MMO as to whether monitoring / tracking this issue is captured with permit conditions, or is captured as requirements within the appropriate management plan.	BW Gold acknowledges the recommendation, and agrees that the reviewers recommendation as related to permit conditions or inclusion within a management plan requires consultation with MMO.		LDN/UFN	BWG		Ryan	RT	Ready for Submission	RT; sept 6	Ready for Publishing
1461	Chapter 3 3.5.6.6		LDN/UFN		Jun 11, 2022	1	New		No	Will the freshwater reservoir dam be decommissioned/removed in the post closure phase? Or will it remain a structure post-closure?	The water management plan and reclamation and closure plan includes decommissioning/removal of the Fresh Water Reservoir upon the commencement of the Post-Closure phase.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1462	Appendix 3-Y 8.4		LDN/UFN		Jun 11, 2022	1	New		No	12% to 0.5% grade will cause a significant hydraulic jump, especially when the storm event exceeds the 1:10 year design. Additional armouring on the side slopes at the location of the jump or the use of baffles could be required to disipate the energy and reduce overtopping/excess erosion of the channel	Hydraulic jumps were considered in the development of the designs. The channel depths have been sized to contain the hydraulic jump and the riprap was sized based on the maximum design velocity of the channel supercritical flow.	No	LDN/UFN	KP		Michael/Jaime	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1463	Appendix 3-Y Pg 36 of 38	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Abbreviations have inconsistent text colour	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1464	Appendix 3-Z 4.1.1	Formatting	LDN/UFN		Jun 11, 2022	1	New		No	Font colouring on Bullet 3	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1465	Appendix 3-Z Table 4.1		LDN/UFN		Jun 11, 2022	1	New		No	Glaciofluvial material and Lodgement till are identical by Geostudio standards (Identical Mohr-Coulomb material definition)	That is correct.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1466	Chapter 3 NAG Waste Rock and Overburden AA Section 3.2 Pre-screening Results	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Are Candidates' 1 & 2 proximity to the pit edge at risk of causing instability in the open pit walls?	The placements of Candidates are approximate and final designs/placements will consider the stability of the open pit. Note that the alternative assessment is conceptual in nature.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 25	Ready for Publishing
1467	Chapter 3 Engagement Appendix D-2: Federal Agency Comments on the 2015 Evaluation of Alternative Tailings Technologies for the Blackwater Gold Project PDF P.33	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Was the risk matrix and criteria calibrated to LND / UFN stakeholders as well as NewGold?	The high-level risk assessment only evaluated three areas (safety, environment and technical execution). The likelihood and consequence categories were developed by New Gold, as most of them were within the expertise of the assessment team (i.e., operations, safety and environmental effects). A category of Aboriginal Rights and Title was included in the consequence category.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1468	Chapter 3 Engagement Appendix D-4: Environment and Climate Change Canada Comments on the 2015 Evaluation of Alternative Tailings Technologies for the Blackwater Gold Project PDF P.81	Risk	LDN/UFN		Jun 11, 2022	1	New		No	No change in the comment, but we could also advocate for a soil cover rather than a water cap on the dry stack tailings. The water cap potentially does add to the long-term monitoring costs associated with maintaining a dam into perpetuity. (from Agency ID Number EC-28 row, "Advice from Org / Individual")	The alternatives contemplated in the 2021 Assessment of Alternatives for Mine Waste Disposal (July 2021) consider the tailings disposal as a thickened slurry, paste and filtered tailings 'dry stack' with and without co-disposal of metal leaching waste rock (NAG3) in the tailings storage facility.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1469	Chapter 3 Alt Tech Options Study Section 5.2.4 Closure	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Rather than perpetuate a wet cover for the purposes of limiting oxygen ingress through the use of oxide tailings, a soil cover to limit oxygen ingress and water infiltration should be considered. This would add the flexibility to minimize the liquefaction potential of the tailings to possibly work towards minimization of long-term dam monitoring costs through declassification of the dam.	BW Gold agrees that there are other methods to manage ML/ARD, particularly those that include engineered covers. The closure concept for Candidate 1 includes NAG tailings and/or overburden placed over the PAG tailings and PAG/NAG3 waste rock, rather than relying on a full water cover.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1470	Chapter 3 Alt Tech Options Study All options	Technical/ Risk	LDN/UFN		Jun 11, 2022	1	New		No	For all options the closure of the dam should be taken into account at closure. Reference CDA 2019. Application of Dam Safety Guidelines to Mining Dams 2019 (Revision to Section 2.4) Draft. 2019	Noted.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1471	Chapter 3 NAG Waste Rock and Overburden AA Section 3.1 Screening Criteria	General	LDN/UFN		Jun 11, 2022	1	New		No	Was the use of OB for cover of the LGO Stockpile or other considered, rather than stockpiling the material?	The use of overburden for cover of LGO stockpile during operations was not considered, because the application of the material would dilute the overall grade of the stockpile and subsequently impact the economics of the stockpile. Additional costs associated with rehandling the overburden would further reduce the economics. However, in an effort to improve construction of the stockpile, as discussed with EMLI and Indigenous groups on Thursday June 17th, 2022, several mitigation measures were proposed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. With respect to lift height, BWG acknowledges the opportunity to lower the lift height to reduce ML/ARD, but also notes there are both economic and physical limits that dictate the final lift height selected. A review by BWG indicates dozing costs start to increase as the lift height is reduced below 5m and increase significantly below 3m. Further reduction in lift height is restricted by the physical characteristics of the run of mine rock. Lift heights of below 1m would be difficult to achieve, much less the 0.30m suggested in the meeting. These lift heights would also have significant cost implications and impact the economic viability of the stockpile. However, BWG will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BWG recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason, BWG has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners to ensure capture and treatment of both surface run-off and stockpile seepage. Further, bonding for the stockpile will be provided for as part of BWG's RLCE.	No	LDN/UFN	BWG			RT	Ready for Submission	AT, June 28	Ready for Publishing
1472	Chapter 3 NAG Waste Rock and Overburden AA Section 4.1.1.1 Technical Detail on Candidate 1	Closure	LDN/UFN		Jun 11, 2022	1	New		No	No indication of progressive reclamation for the Upper Stockpile	The progressive reclamation and reclamation activities for the Upper and Lower waste stockpiles are now provided in Section 4.1.1.1 of Appendix B (May 2022): "While the Upper Waste Stockpile will contain NAG waste rock, the outer surface will consist predominantly of overburden as this material will be a component of the rooting zone modelled for the planning of soil covers and vegetation prescriptions at closure and post-closure. The Lower Waste Stockpile will start receiving overburden in Year -2 and receive the final material in Year +10. The stockpile will be a source of reclamation material for progressive reclamation, and Closure and Post-closure phases. At closure the profile of the waste stockpiles will be engineered to minimize planar surfaces and create sigmoidal slopes with 20% gradient toe slopes, 30 to 40%-gradient short main slopes, and rounded crests similar to natural landforms. This design will help reduce erosion, which is a threat to achieving revegetation success, especially during early reclamation. The design will also create a pattern of soil moisture and nutrient regimes with increasing moisture and nutrient availability on the lower receiving slopes as a function of downslope water transfer. It is expected that over time, the vegetation community will reflect the variation in soil moisture and nutrients, which will increase species diversity on the site, and this has been reflected in the initial revegetation prescriptions."	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 25	Ready for Publishing
1473	Chapter 3 FMEA Section 2 Risk Analysis	Risk	LDN/UFN		Jun 11, 2022	1	New		No	2.1 says the TSF design "incorporates design measures and operational practices that lead to an overall low risk profile". Who's risk profile is this based on? Furthermore, this comment does not capture risk associated with closure and post-closure timelines	Project engineers identified in Section 2.2.1 of the FMEA (Appendix H) developed the risk matrix. Section 1.5 of the FMEA (Appendix H) indicates that the three phases of development were considered (Construction and Commissioning; Operations; and Closure and Decommissioning).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1473	Chapter 3 FMEA Section 2 Risk Analysis	Risk	LDN/UFN (OKane_Terryn Kuzyk)		Jul 22, 2022	2	Follow Up	Information Requirement	No	As mentioned in comments 1414. 1476. 1477, and 1479, The risk profile/ratings are inadequate, please ensure that risks are appropiately characterized in the UFN/LDN FMEA.	BW Gold acknowledges the opinion of the reviewer related to the risk profile/ratings; this opinion is not shared. Note that the round 2 responses to comments 1414, 1476, 1477 and 1479 attempt to clarify that the FMEA risk assessment framework included in Appendix 3-M is not the same as the consequence classification / dam hazard classification framework discussed in the design reports (Appendices 3-J and 3-K). Consequence classification / dam hazard classification is not an assessment of risk. Risk assessment requires that both the potential consequences of failure and likelihood of failure be taken into consideration.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	RTI; aug 16	Ready for Publishing
1474	Chapter 3 FMEA Section 2.1.1 Cofferdams	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Cofferdams have been designed to manage very specific storm events. It is not clear from the report how these storm events were selected. The additional measures to mitigate risk associated with the Site D cofferdam also do not have a presented design basis.	For the purpose of the FMEA (Appendix H), the sizing of the cofferdams used a typical 1-in-10 year, 24-hour storm, but also selected the storm during three wet months (August, September and October). The Joint *Mines Act / Environmental Management Act* Permits Application (April 2022) has the detailed designs for the cofferdams, with updated design criteria and rationale.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1475	Chapter 3 FMEA Section 2.2	General	LDN/UFN		Jun 11, 2022	1	New		No	What was the question being asked here? It strikes me that with only two medium risk rankings and no higher rankings, the wrong evaluating question is being asked.	Details of each risk description, defense measures in place, additional defense measures to be applied in permitting, the likelihood, impact, overall score and classification can be found in Tables 1.1 and 1.2 of the FMEA (Appendix H).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1476	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Risk ID 7/9: How is foundation failure considered very low, when this has the potential to significantly impact Tatelkuz Lake?	The likelihood and consequence rankings are presented in Tables 1.1 and 1.2 of the FMEA (Appendix H) for all risk IDs, including 7, 9, 13 and 14. Rationale for the two levels of defensive measures are described that lead to the classifications for each ID. A summary of risk ranking improvements that contributed to lower residual risk ranking for each ID are detailed in Table 3.2.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1476	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN (OKane_Jill Ashbury)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Based on the consequence classification of very high to extreme and likelyhood of being "2-likely" the risk/consequence classification value from your risk matrix does not match the given value in table 2.2. Please re-evaluate.	The FMEA risk assessment framework included in Appendix 3-M is not the same as the consequence/dam hazard classification framework discussed in the design reports (Appendices 3-J and 3-K). Consequence classification / dam hazard classification is not an assessment of risk. Risk assessment requires that both the potential consequences of failure and likelihood of failure be taken into consideration. The FMEA included in Appendix 3-M indicates that some risks are classified as 'low risk' that have the potential for major to catastropic consequences. In the instance of Risk ID #9, the risk assessment indicated the potential for catastrophic consequences (5 - consequence score) and a very rare likelihood of occurence (1 - likelihood score) prior to additional mitigation measures being applied. This resulted in a 'low risk' rating in this assessment since the product of these two ratings (5 x 1) results in a numerical value between 4 and 6, which aligns with the 'low risk' category in the FMEA (Table 1.3 of Appendix H of Appendix 3-M).		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1477	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Risk ID 13: Again, collapse of the dam in operations and closure should not be considered low	The likelihood and consequence rankings are presented in Tables 1.1 and 1.2 of the FMEA (Appendix H) for all risk IDs, including 7, 9, 13 and 14. Rationale for the two levels of defensive measures that lead to the classifications for each ID are also described. A summary of risk ranking improvements that contributed to lower residual risk ranking for each ID are detailed in Table 3.2.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1477	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN (OKane_Jill Ashbury)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Based on the consequence classification of very high to extreme and likelyhood of being "2-likely" the risk/consequence classification value from your risk matrix does not match the given value in table 2.2. Can this be re-evaluated based on this information?	The FMEA risk assessment framework included in Appendix 3-M is not the same as the consequence/dam hazard classification framework discussed in the design reports (Appendices 3-J and 3-K). Consequence classification / dam hazard classification is not an assessment of risk. Risk assessment requires that both the potential consequences of failure and likelihood of failure be taken into consideration. The FMEA results included in Appendix 3-M indicates that some risks are classified as 'low risk' that have the potential for major to catastropic consequences. In the instance of Risk ID #13, the risk assessment indicated the potential for catastrophic consequences (5 - consequence score) and a very rare likelihood of occurence (1 - likelihood score) prior to additional mitigation measures being applied. This resulted in a 'low risk' rating in this assessment since the product of these two ratings (5 x 1) results in a numerical value between 4 and 6, which aligns with the 'low risk' category in the FMEA (Table 1.3 of Appendix H of Appendix 3-M).		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing

1478	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Risk ID 14: If risk was being truly mitigated, there would not be a supernatant pond in closure	The likelihood and consequence rankings are presented in Tables 1.1 and 1.2 of the FMEA (Appendix H) for all risk IDs, including 7, 9, 13 & 14. Rationale for the two levels of defensive measures that lead to the classifications for each ID are also described. A summary of risk ranking improvements that contributed to lower residual risk ranking for each ID are detailed in Table 3.2. While the industry has been moving in the direction of reducing and/or eliminating surface ponds on tailings facilities for closure phases to reduce geotechnical risk, there remains geochemical risk if this is not factored in to the closure concept. Achieving saturation, either by incorporating a surface pond or through a 'dry' cover, or some combination thereof, will balance the two (sometimes competing) imperatives. Thus, removal of a pond during closure may mitigate one risk, but it could increase other risks.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1479	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	In general, these risks seem unreasonably low for a tailings facility in Davidson Creek.	Details of each risk description, defense measures in place, additional defense measures to be applied in permitting, the likelihood, impact, overall score and classification can be found in Tables 1.1 and 1.2, Figure 2.5, Table 2.2 and 3.2 and Figure 3.2 of the FMEA (Appendix H). From Section 3.5 of the FMEA (Appendix H): A total of 39 hazards were identified and catalogued in Table 1 of Appendix A. The preliminary classification of each risk was shown on Figure 2.5. The preliminary classifications were completed based on the design measures and operational practices included in the TSF design, and included: 2 median risk ratings	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1479	Chapter 3 FMEA Table 2.2	Risk	LDN/UFN (OKane_Jill Ashbury)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Based on the consequence classification of very high to extreme and likelyhood of being "2-likely" the risk/consequence classification value from your risk matrix does not match the given value in table 2.2. Can this be re-evaluated based on this information?	The FMEA risk assessment framework included in Appendix 3-M is not the same as the consequence/dam hazard classification framework discussed in the design reports (Appendices 3-J and 3-K). Consequence classification / dam hazard classification is not an assessment of risk. Risk assessment requires that both the potential consequences of failure and likelihood of failure be taken into consideration. We do not know if this follow-up question is related to all Risk IDs, or a specific one (as was the case for comments 1476, 1477 and 1478. However, the details and rationale for how each Risk ID rating was developed is the same as described in the resoonses to 1476, 1477 and 1478.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1480	Chapter 3 Tailings Storage Facility - Life of Mine Design Figure 5.1	Technical	LDN/UFN		Jun 11, 2022	1	New		No	The section views of the Main Dam C (G0105, G0106, G0107) do not include elevation markings for tailings within TSF beyond year 6, and indicate that the portion of the dam will be built in what is effectively an upstream fasion over top of tailings in TSF D. There is no indication that this was considered in any of the evaluation metrics for scoring of Candidate 1. Furthermore, in the alternatives assessment Candidate 1 is routinely described as a single facility, while in the TSF design report it is described as TSF C and TSF D.	Main Dam C beyond Year 6 is built in a downstream fashion over waste rock. There are no tailings within TSF D until after construction of Main Dam C is complete. The TSF was designed as a single integrated facility and comprises two adjacent sites developed progressively over the life of the mine.	No	LDN/UFN	KP		Copied from AA Appendix A-7	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1480	Chapter 3 Tailings Storage Facility - Life of Mine Design Figure 5.1	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Drawing G0105 indicates that the Main Dam C will be bult in an centerline fashion with regards to TSF C. Upon reaching Year 6, The Main Dam C will be raised in an upstream method with regards to TSF D (downstream method with regards to TSF C) Are tailings planning to be distributed into TSF C after year 6, and if so, update drawings to depict those elevations.	Tailings are planned to be distributed to TSF C until approximately Year 21 of operations as described in Section 5 of Appendix 3-K (TSF Life of Mine Design Report). The intent of drawing G0105 was to show the dam section and adjacent upstream/downstream PAG waste rock elevations on an annual basis; the drawing will not be updated to depict the tailings elevations as requested by the reviewer. The estimated tailings discharge elevations and resulting supernatant pond elevations on an annual basis were provided in Table 5.2 (of Appendix 3-K) with additional details included in Appendix E2 (of Appendix 3-K). The tailings beach can be assumed to have a grade of approximately 1% between these elevations. The tailings beach elevations/areas in TSF C are shown for Years 1, 2, 3, 5, 8, 13, 18, and 23 on Drawings G0021 to G0028, respectively, in Appendix F (of Appendix 3-K). EMLI requested cross sections of TSF C and TSF D combined in Comment ID 290 during Round 1 of the technical review. The figures developed based on this request are included in the attached response "R1_EMLI Geotech Comment ID 290.pdf"		LDN/UFN	KP		Dan	AT/KP	Ready for Submission	AT, Aug 13	Ready for Publishing
1481	Chapter 3 2019 Geotechnical Site Investigation Data Report Borehole logs	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Presence of glaciolaustrine clay, silt, and clayey silt in locations of TSF foundations.	Yes, as described in Appendix 3-L and the associated design reports.	No	LDN/UFN	KP		Copied from AA Appendix A-7	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1482	Chapter 3 Assessment of Alternatives for Mine Waste Section 7.1.2.3	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Method of filtered tailings placement is described in 7.1.2.1 (Location and Tailings Type) as using truck haulage with consideration for conveyor placement. No mention of conveyor use is present in Section 7.1.2.3 or in any of the assessment for Candidate 7.	Section 7.1.2.3 states: "Placement of filtered tailings with a conveyor system might be simpler from a bulk material handling standpoint; however, a great deal of maneuvering will be required especially in the initial lifts. There may be an opportunity to move from trucking to a conveyor system in the later years of operation." The criteria "Tailings delivery complexity" indicates that Candidate 7 "requires a complex system of conveyor / stacker (likely more than one) or truck haul delivery", as specified in Table 7.2-3 of the Alternatives Characterization and considered in the Value-based Decision process.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1483	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Physical Stability Account	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Location of Water Storage: There may be opportunity to design tailings placement for Candidates 7,10, and 22 that provide for water storage away from containment dams, however, this is not included in this evaluation.	Candidate 7's tailings are filtered. Therefore, if tailings were to be used to store water away from the dams, it would be a different tailings technology and a different candidate than described. Candidate 10 - the paste tailings candidate does discuss decanting water from the dam face, but a separate water management pond would be required to provide the water requirements for the process plant. Thus, water against the dam would still exist under such a variant to Candidate 10. Candidate 22's tailings are filtered. Therefore, if tailings were to be used to store water away from the dams, it would be a different tailings technology and a different candidate than described. Therefore, no changes to the characterization were made in the May 2022 Alternatives Assessment report.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1484	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Normal Operating Pond Volume	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Normal Operating Pond Volume: Alternatives assessment does not include evaluation of potential deposition locations/schedules (e.g., alternate deposition plan to minimize pond volumes or water storage location relative to dam structures)	Pond volumes for candidates are primarily driven by the process plant requirements and the tailings technology selected, rather than the tailings deposition plan. Therefore, no changes to the characterization were made in the May 2022 Alternatives Assessment report.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1485	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Emergency Water Management Pumps (Active)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Emergency Water Management - Pumps (Active): Justification for this assessment metric is unclear. This appears to preferentially score in favour of Candidate 1 simply because the reclaim pump is larger by default. This should be revisited to identify the appropriate assessment metric (e.g., supplemental emergency water pumping capacity required)	Additional justification for pump capacity for emergency water management is provided in the May 2022 Alternatives Assessment report (Table 7.2-2). The reclaim pump capacity is a function of the process plant water demand, which in turn is a function of the tailings technology. Filtered tailings recovers the highest volume of water in the process plant, and thus requires the smallest pumping capacity from the water management pond (Candidates 7 & 22). Paste tailings recovers larger volumes of water at the process plant, and will therefore require larger pumping capacity in comparison to filtered candidates from the TSF supernatant pond (Candidate 10). The thickened tailings technology recovers the lowest volume of water in the process plant, and thus requires the largest pumping capacity from the TSF when compared to other tailings technologies (Candidate 1).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1486	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Design Basis / Regulatory Requirement	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Design Basis / Technical Requirement: The basis of scoring that additional design requirements and regulations with increased scrutiny results in higher scores is fundamentally flawed. Why would additional work requirements be better? Why wouldn't all Candidates not be subjected to the same level of internal scrutiny and receive the same score? If anything, a lower consequence classification should receive a better score than a higher classification.	As stated in Section 7.2-2 of the May 2022 Alternatives Assessment report: "Regulations that specify design requirements with increased oversite are preferable to limited guidance and regulation. For example, the regulatory requirements for conventional (slurry) tailings dams (i.e.., dams classified as high to extreme consequence), as well as for sub-aqueous PAG rock storage, are well developed (e.g., CDA Dam Safety Guidelines (CDA 2007 [Revised 2013]), Technical Bulletin: Application of Dam Safety Guidelines to Mining Dams (CDA 2019), Mines Act (1996c, Health, Safety and Reclamation Code for Mines in BC, 2021), whereas filtered tailings regulatory requirements in BC are generally undeveloped, but presumably would be interpreted as mine waste piles (guided by British Columbia Mine Waste Rock Pile Research Committee (1991) Mine Rock and Overburden Piles: Investigation and Design Manual – Interim Guidelines, May 1991)." There are no changes to the scoring made in the May 2022 Alternatives Assessment report.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1486	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Design Basis / Regulatory Requirement	Technical	LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The question and concern raised in Round 1 remains; lower conssequence effect classifcation and less requirements to meet should score higher, not the opposite. It is appreciated that no changes to the May 2022 Alternatives Asessment report will be made; hwoever, the responses provided does not address the original question / concern.	BW Gold understands and appreciates the reviewer's perspective. Focusing only on the specific indicator that was developed as part of the Physical Stability Account (i.e. Design Basis / Regulatory Requirement), the important thing to recognize is that increased design standards and regulatory/review requirements conceptually will result in a more physically stable alternative where as lower design standards are potentially a detriment from a physical stability perspective. The opposite might be true if the lens was different (i.e. higher design standards will result in higher costs relative to lower design standards). A suitable example to illustrate the logic of this criteria is the requirements stated in Part 10.1.8 of the Health, Safety and Reclamation Code for Mines in BC (the Code; EMLI, 2021) where the minimum seismic design criteria for a tailings facility that can store water is higher than the corresponding minimum seismic design criteria for a facility that does not. This indicates that the minimum regulatory design standard required for a filtered tailings facility for a seismic event is lower than a corresponding tailings facility that can store water. While the two options might receive the same level of scrutiny, the regulated minimum design basis requirements are not the same. This subaccount is just one of many considered in the Multiple Account Analysis. We hope the above response further clarifies the basis of the rankings made in the study.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1486	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Design Basis / Regulatory Requirement	Technical	LDN/UFN (OKane_Mike O'Kane)		Sep 06, 2022	3	Follow Up		Yes	We respectfully disagreee with the proponents response. We recommend that a failure modes and effects analysis (FMEA), whcih focuses on closure conditions, will very likely result in further focus being brought to this issue as it willl allow a broad range of perspectives to be 'heard' when the risk matrix developed by LD/UFN is applied. At the very least a description of what method was used beyond the CDA guidelines to determine the consequence classification is required. This will require consultation with MMO as to whether monitoring / tracking this issue is captured with permit conditions, or is captured as requirements within the appropriate management plan.	BW Gold acknowledges the comment. BW Gold expects that ongoing consultation on the Reclamation and Closure Plan (RCP), particularly as it relates to outcomes of the proposed reclamation research trials and updated risk assessment related to refinements of the RCP, will address a number of these observations.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Sep 16	Ready for Publishing

1487	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Tailings Density	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Tailings Density: Candidate 10 (paste tailings) have a higher initial density compared to slurry tailings, and can provide advantageous properties (i.e.., less segregation) that can aid in improving consolidation, dewatering, strength gain, etc... compared to slurry. This should be reflected in description and scoring.	While paste tailings are characterized as having a moderate initial density (Candidate 10) compared to the lowest initial density for thickened tailings (Candidate 1), the final density of the two tailings technologies are the same. Given that the final density will apply for the closure and post-closure phases, which are dramatically longer than the operations phase, scoring was applied considering the final density only. Other stated potential benefits from paste compared to thickened (such as less segregation) are not directly related to the rationale for this indicator; that is, reducing the potential for mobilization of tailings. Therefore, no changes to the characterization have been made in the May 2022 Alternatives Assessment report.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1488	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Operational monitoring Requirements - Safety	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Operational Monitoring Requirements - Safety: Candidate 1 is described as being one TSF, however, designs describe two TSFs (TSF C & TSF D). Furthermore, basis of scoring for intensity of monitoring is not described. Differentiation of requirements between candidates is not clear.	The TSF Life of Mine Design Report (The TSF Life of Mine Design Report provided as Appendix 3-K in the Joint *Mines Act / Environmental Management Act* Permits Application in April 2022) describes the TSF that comprises two adjacent sites, TSF C and TSF D (Section 4.1 of Appendix 3-K of the Application), consistent with the Candidate 1 description. Section 7.2.1 of the Alternatives Assessment report provides the rational for scoring "Operational Monitoring Requirements -Safety", as Candidates which are less susceptible to changes require less operational monitoring effort and are preferable. In addition, Table 7.2.2 states "Alternatives that are less susceptible to sudden changes in conditions and require less monitoring effort are preferred." As dewatering requirements for tailings increases, the potential to generate off-spec product increases. There will be times when the filter plants nor the paste plant and/or positive displacement pumps do not function at capacity, which all require increased operational monitoring. Therefore, no changes to the characterization were made in the May 2022 Alternatives Assessment report.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1488	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Operational monitoring Requirements - Safety	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Although Candidate 1 is two facilities worre are two fluid retainin ing in conjunction with one another (TSF C and TSF D) there are two fluid retaining structures (Main Dam C and Main Dam D), retaining two separate areas that will require separate monitoring. This requires additional monitoring for both structure and both TSF's and this was not reflected in the scoring.	Candidate 1 is not two tailings facilities, as described by the reviewer. The TSF comprises two adjacent sites, as described in the TSF Life of Mine Design Report (Section 4.1 of Appendix 3-K). While there are multiple dams for the Candidate 1 TSF, it is only one TSF. Waste rock placed within TSF D acts as a buttress to Main Dam C. This also applies for Candidate 10 (i.e. the Paste candidate), where there is a single TSF with multiple dams. The differentiator is not the number of dams, but completely non-adjacent (i.e. separate from eachout) facilities that require increased monitoring, partiulcarly if the alternative is suggesting a technology that is more susceptible to sudden changes (such as filtered and/or paste tailings technologies) that would influence the stability of the facility.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1489	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Tailings initial settled density	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Tailings initial settled density. It is commonly acknowledged that paste tailings have higher initial densities and lower water contents than slurry densities, and scores should reflect this. Basis of scoring ranges overlap; these should be more distinct for purposes of scoring.	Table 7.2-3 of the May 2022 Alternatives Assessment now indicates that paste tailings (Candidate 10) has a low initial settled density compared to the very low initial settled density for thickened tailings (Candidate 7). This is also reflected in the revised score for Candidate 10 - 1.3 - 1.7 t/m3 – low tailings solids density. The scale was set as ranges of very low to very high initial settled density.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1490	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Drainage Provisions	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Drainage Provisions: Definition of "simple" and "complex" drainage provisions is not provided.	Descriptions of simple through to complex drainage provisions are provided in Appendix F (MAA Ledger) for each of the candidates, focusing on embankment drains and foundation drains for both the TSF and/or waste rock facilities.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1491	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Seepage management - quality	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Seepage Quality: Candidate 22, there is no in-between option shown where a balance of waste rock is submerged in the TSF and some material is stored on land. This could be presented as another candidate in alternatives assessment.	If a proposed in-between option was provided, it would score in between options with all material submerged in the TSF (similar to Candidate 1) and Candidate 22 because it would have the two storage locations. This would not add any benefit to the assessment and would be better utilized following determination of a preferred alternative to optimize the design through the permitting phase of the Project.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1492	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Foundation preparation for tailings storage area (excludes dam)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Foundation preparation for tailings storage area (excludes dam): There is no metric that includes dam foundation preparation. Given the presence of glaciolacustrine clay, silt, and silty clay, this may be significant in the area of all dams.	Given that the foundation area would be significant in the area of all dams, the criteria would be non-differentiating and not carried forward to the MAA. Initial dam construction was differentiating and brought forward to the MAA.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1492	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger:	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Dam foundation preperation is significant in the area of all dams, however, the criteria would be differentiating as not all dams are built the same, nor have the same footprint. Candidate 22 has a much smaller footprint and therefore a much smaller dam foundation zone. This would require significantly less doundation prep and has not been accounted for in the MAA. Additionally, Candidate 1 is the only option brought forward to the MAA with 2 large TSF dams, requiring significantly more foundation prep.	Correct. Not all dams are built the same. Nor is it the case that larger dams in one location require more foundation preparation than a smaller dam in a different location. It is dependent on a number of factors, including foundation conditions, seepage maangement/cutoff, size of dam and design of dam. The technical indicators selected used to differentiate dam construction complexity in the Construction Requirements and Containment Design subaccounts included consideration for the number of dams, initial dam construction complexity, style of containment, construction volumes, and sustaining construction requirements. Candidate 22 generally ranked higher in several of these technical indicators, which adequately addresses the nature of the comment. Candidate 1 was ranked lower for requiring more dams, having larger construction volumes, and for having more complex initial construction and sustaining construction requirements.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	AT Aug 13	Ready for Publishing
1493	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Initial Dam Construction	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Initial Dam Construction: Volume of materials required for each candidate is not provided for review. Based on the drawings and descriptions provided there is no information to indicate that Candidate 1 outperforms Candidate 7 and 10.	The alignment for the dams for Candidates 7 & 10 are approximately the same as Main Dam D, which is a less-efficient location for dam placement compared to Main Dam C (i.e.., the location for the Candidate 1 dam alignment). Therefore, Candidates 7 & 10 were scored the same, as their initial dam sizes/locations are very similar. Candidate 1 scored slightly better in comparison because the alignment of Main Dam C is more efficient. These descriptions have been added in the May 2022 Alternatives Assessment Table 7.2-3.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1494	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Flood Routing	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Flood Routing: Alternative water routing options may exist within each Candidate design that could alter scoring in this category.	The May 2022 Alternatives Assessment report Section 7.2-2 now includes a statement to indicate that the most reasonable flood routing scenarios for each alternative were considered for the characterization of flood routing. Large TSF areas (i.e.. Candidates 1 & 10) have the design capacity to manage floods. Candidate 7 can also manage the flood in the construction area, but this is less preferred. The small pond for Candidate 22 has the least capacity to manage the flood.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1495	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Water balance - surplus/deficit balance: Water balance and water management options are not discussed in detail in this assessment, and alternatives should be examined for opportunity to improve scoring of all Candidates.	If improvement to scoring all Candidates were realized from a detailed water balance and water management for each, there likely would be no or small changes to the relative scoring. Improvements in water balance and water management would be better utilized following determination of a preferred alternative to optimize the Project design.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1495	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Water balance - suplus/deficit balance	Technical	LDN/UFN (OKane_Blake Weinrauch; Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Very brief water management plans are described for each alternative in Appendix 3-M. Furthermore, there is no basis for the response in respect to changes to relative scoring; that is not the sole purpose for contacting an alteratives assessment. Due to the importance of water management, a more detailed water balance assessment should be examined for each alternative. Please provide documentation of any water balance exercises that have been completed for alternatives.	A high-level description of water management for each canadidate was developed, and is included in Appendix 3-M. Preliminary annual water balance workfiles were prepared during the initial study in 2015 to inform the selected rankings, but were not issued as a supporting document because the rankings are largely qualitative and detailed water balance modelling for each candidate was not required to develop the nececssary information for the comparative assessment in the MAA. The catchment areas defined during the characterization step (Table 7.2-3), combined with the tailings management technology (i.e. thickened, paste and/or filtered), and the waste rock storage technology (i.e. sub-aqueous vs. on-land) provide the key aspects regarding water consumption. This basic information was sufficient to derive the values used in this indicator.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP. Aug 16	Ready for Publishing
1496	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Water Treatment	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Water treatment: rigorous control of materials required to ensure that waste rock used for construction of dam facilities across all Candidates are non-acid generating .	Noted. The rationale for this indicator states "Alternatives that require capture of surface water from multiple areas for treatment and discharge are less preferred."	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1497	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Surplus Water Management	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - Surplus water management : Surplus water management options not described for any of the Candidates. There may be options that improve each candidate's score.	Surplus water management has been identified for each of the candidates evaluated: Section 7.1.1.2 (Candidate 1): As identified in the PFS (Artemis, 2020), this surplus water will be used to accelerate open pit filling and limit the onset of acid rock drainage conditions in the pit walls. Section 7.1.2.2 (Candidate 7): The TSF operational pond capacity is sufficient to manage a reasonable range of surplus water conditions on an annual basis. The surplus will require a treated operational discharge to Davidson Creek throughout operations. The surplus site water will be used to accelerate open pit filling in closure and limit the onset of acid rock drainage conditions in the pit walls. Section 7.1.2.3 (Candidate 10): The surplus water will be managed with a combination of fresh water diversions and a treated operational discharge to Davidson Creek later in operations. The TSF operational pond capacity is sufficient to manage a reasonable range of surplus water conditions on an annual basis. The surplus site water will be used to accelerate open pit filling in closure and limit the onset of acid rock drainage conditions in the pit walls. Fresh water diversions could remove approximately three Mm3 per year from the water surplus under average conditions. Section 7.1.2.4 (Candidate 22): The TSF operational pond capacity is sufficient to manage a small range of surplus water conditions on an annual basis. The surplus will require a treated operational discharge to Davidson Creek throughout operations. In all options, surplus water management will require on-going monitoring, calibration of model predictions and active management of water treatment to meet design objectives and to confirm that permitted operational surface water discharge allowances meet requirements to manage the water balance on an inter-annual basis. Thus, additional options for surplus water management is more applicable for the permitting phase once a preferred alternative is selected. Improving the score of all candidates would likely not affect the preferred candidate selection (i.e.., the relative scores are not expected to change).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1497	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Surplus Water Management	Risk	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	This characterization criteria echos the "Water Balance - Surplus/Deficit Balance" characterization criteria and mirrors its score, which provides twice the value to high scoring alternatives and double penilizes poor scoring alternatives. This characterization criteria could be combines with the aforementioned "Water Balance Criteria" to eliminate double counting. The water management methods are discussed in both characterization criterias.	The descriptions between the indicators 'Water Balance - surplus/deficit/balance' and 'Surplus Water Management' are similar, but are meant to address different issues. While diversion of water is included in the first indicator descriptions for all candidates, it is not an option to manage surplus water for the second indicator for Candidates 7, 10 and 22. The similarity in scoring is a coincidence, as the scale descriptors are unique for each of the two indicators. BW Gold does not share the opinion of double-counting for these two indicators. Candidates 7, 10 and 22 are expected to generate more surplus water requiring management and the surplus water management strategies are expected to be more complex, hence the lower rankings. Nevertheless, a number of the sensitivity scenarios presented in Appendix G of Appendix 3-M remove this concern as a potential issue.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1498	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Characterization Criteria - operational monitoring requirements - internal site water management: "complicates" requires additional description. What is more complicated in Candidates 7 & 10 relative to Candidate 1?	Table 7.2-2 of the May 2022 Alternatives Assessment has been revised as follows: Candidate 7: Potentially more susceptible to sudden changes in conditions. The positioning of mine facilities also complicates monitoring requirements, whereby the facility is more susceptible to changing conditions should the dewatering and/or filter plants stop functioning. Candidate 10: Potentially more susceptible to sudden changes in conditions. The positioning of mine facilities also complicates monitoring requirements with additional infrastructure to manufacture, transport and deposit, including positive displacement pumps, high-pressure pipelines and a central discharge location, adding complexity to the continuous operation of this site, including the capture and return of site water.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1499	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Technology precendent - processing	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Execution - Technology precedent - processing: Scale is inconsistent for rating (i.e.., tonnage ranges are not consistent). Recommend completing additional literature review to identify successful application of technologies. Cursory review indicates that thickened tailings and paste tailings production has been proven at and above the project throughput (e.g., Sierra Gorda Sociedad Contractual Minera @58-62% solids up to 110,000 tpd) (Centinela Mine @65% solids up to 105,000 tpd) (Esperanca @ 65% solids up to 95,000 tpd) (Caserones @60 % solids up to 90,000 tpd). Additional review of filtered tailings required.	Noted about these options. However, the descriptions for each candidate include tailings technology at Project throughput and in the climate of the Project. The examples provided are certainly above the throughput for these tailings technologies, but their climates are somewhat different than experienced at the Project site, which would likely have an impact in the performances of those technologies.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1499	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Technology precendent - processing	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Comment	No	The project referenced by BW (Green's Creek) utilizes tailings stockpiled in an ~25 ha facility at 1500 TPD. This may not be representitive of the capacity that BW can produce thickened and paste tailings. The climate at Greens Creek (Alaska) experiences a different climate than BW proposed location. A more reasonable comparison for filtered tailings production should be used to re-evaluate scoring.	The various examples of filtered tailings that are provided (Appendix E or Appendix 3-M) include La Coipa (>20k tpd) (Chile), the Karara Mine (~40k tpd) (Australia), and the Greens Creek mine (1.5k tpd) (southwest Alaska). The first two examples, while larger in throughput than the last example, are in dry climates with little precipition. The Greens Creek example, while a much smaller throughoupt, and an underground deposit, has a wetter climate than exists at Blackwater, but does experience both winter and summer conditions. For these reasons, it was considered as the most reasonable example for the purpose of conducting the MAA. BW Gold recognizes that there are continual advances in various tailings technologies, including expanding scale and application in a variety of climates. Challenges of developing a large-scale filtered tailings facility that experiences both winter and summer precipitation are well known, which is part of the reason why there are few relevent examples to compare to for the Blackwater Project. An interesting compilation of Canadian and International projects that graph daily tailings production vs. Mean Annual Precipitation minus Annual Evaporation (mm) can be found in Figures 4.1 & 4.2 of MEND Report 2.50.1, Study of Tailings Management Technologies, October 2017. Figure 4.2, in particular, makes it clear that there are few large-scale filtered tailings facilities in comparable climates.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing

1500	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Closure concept - physical	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Closure - Closure concept - physical: Alternate pond locations should be considered for each Candidate (i.e., tailings deposition plan for each Candidate may have significant effect on pond location relative to dam).	Numerous optimizations can be developed for any candidate. Reasonable and appropriate conceptual designs were developed to inform this alternatives assessment.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1501	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Closure	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Closure - Closure concept - active closure period: supernatant volumes used for scoring are based on pond volume which may have possible improvements in Candidate 7 and Candidate 22, particularly if alternate tailings deposition plans are evaluated.	Scoring is not based on supernatant pond volumes, but rather the reporting catchments to the TSFs relative to the volume of water to fill the pit (this statement is now included in Section 7.2.2 of the May 2022 Alternatives Assessment). Candidates 1 & 10 have larger reporting catchments, therefore they have more water to fill the pit faster (and a shorter active closure period) in comparison to Candidates 7 & 22.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1502	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Closure concept - long-term maintenance and monitoring	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Closure - Closure concept - long-term maintenance and monitoring: The differences in ranking require further justification, in particular, the distinction between Candidate 1 (Score = 5) and Candidate 10 (Score = 3).	Differences in scoring are related to ML/ARD risk, which is now provided in the rationale (Table 7.2-2) of the May 2022 Alternatives Assessment report. Candidate 22 has the highest risk and two sites to monitor, thus the lowest score. Candidate 7 has the next highest score as it also has two sites, but one (the waste rock) is managed sub-aqueously. The paste and slurry tailings facilities are similar, but the paste facility has a slightly higher ML/ARD risk due to some tailings potentially not being saturated, resulting in Candidate 1 with the best relative score.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1502	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Closure concept - long-term maintenance and monitoring	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Comment	No	Candidate 1 will require long-term maintainance and monitoring, and should not be scored as only requiring short-term monitoring (should score 4, rather than 5)	The description for the score of 5 is 'One facility of concern, short-term internal water quality monitoring, to confirm expectations'. Because the tailings and waste rock technology that was chosen for Canadidate 1 is storage that prevents the onset of ARD/ML through saturation, the expectations for what water quality will be in the long-term are likely to be determined quickly. Compared to candidates that do not prevent the onset of ARD/ML through the same means (i.e. filtered stack tailings and/or on-land PAG waste rock), it may require much longer internal (i.e. on-site) monitoring to understand and adapt to the post-closure water quality. The differentiation stated in the scale is related to long-term water quality monitoring and maintenance including potential for upset conditions. All options are assumed to require long-term geotechnical monitoring similar in scope and scale. This subaccount is just one of many considered in the MAA. We hope the above response further clarifies the basis of the structure, indicators, and rankings made in the study.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1503	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Climate and Atmosphere - Dust emissions: Further justification should be provided for difference in scores between Candidate 1 and Candidate 10.	The descriptions of Candidate 1 and 10 for dust emissions have been revised as follows in the May 2022 Alternatives Assessment report: Candidate 1 (Thickened - Slurry Tailings) - low potential for dust generation, as tailings are deposited with a 50% solids content from multiple spigots. Candidate 10 (Paste Tailings) - low to moderate potential for dust generation, as tailings are deposited from a central discharge location with a 65% solids content and beach slope of 1.5%, thus having less retained moisture and the potential for increased dusting compared to the thickened slurry technology.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1504	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Surface Water Quality - Storage of PAG material	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Surface Water Quality - Storage of PAG material: The description for Candidate 1 and Candidate 10 are the same, but scores are different. Provide further justification for scoring or score consistently.	The descriptions of Candidate 1 and 10 for "Storage of PAG material" have been revised as follows in the May 2022 Alternatives Assessment report (no change to the scores): Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Storage of PAG waste rock and tailings sub-aqueously; lowest risk of ML/ARD. Candidate 10 (Paste Tailings/Submerged PAG/NAG3) - Storage of saturated PAG waste rock and most tailings sub-aqueously; central discharge location and 1.5% beach slope increase exposure time of tailings operationally; low risk of ML/ARD.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1505	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Surface Water Quality - Seepage Quantity	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Surface Water Quality - Seepage Quantity : Water ponded against dam in Candidate 7/10/22 may be avoided or mitigated using alternative tailings deposition within existing TSF alternatives configurations.	For Candidates 7 and 22, water will need to be kept separate from the filtered tailings. Thus, it can only be contained by a water-retaining dam. For Candidate 10, the most efficient tailings deposition method identified for paste tailings is a central discharge point. Discharge from the embankment crests is possible, but is less efficient, and would result in challenges to direct the water to a single decant location. Thus, the more efficient discharge method for this technology was selected, rather than selecting an option that would potentially keep water away from the dam. Therefore, no changes have been made in the May 2022 Alternatives Assessment report.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1506	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Groundwater - Groundwater quality	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Groundwater - Groundwater Quality: Additional justification for scoring of groundwater quality impacts between Candidates is required. Lower quantities of tailings water (e.g., pore water, interstitial water, and free water) in thicker tailings (e.g., paste, filtered tailings) might serve to reduce groundwater seepage and quality impacts compared to Candidate 1.	This indicator is focused only on the relative risks to groundwater quality from each candidate, rather than the volume of seepage that may report to groundwater. While there may be a number of factors that affect quality, the rationale used was that the greatest factor to affect potential changes to groundwater quality is how ML/ARD is managed within each candidate. Section 7.2.3 (Groundwater quality) indicates that the "Groundwater effects from the Project are predicted to be minimal provided mitigation measures, including seepage cut-off and collection ponds are in place and effective around the perimeter of the TSF." Thus, comparison of candidates was based on "Groundwater quality is influenced by the generation of infiltration to aquifers by ML/ARD, primarily from PAG/ML material. PAG/ML materials stored such that the materials are not either sub-aqueous or in a saturated state are expected to generate ML/ARD, resulting in higher risk of affecting groundwater quality compared to those candidates where PAG materials are submerged." Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - PAG rock and tailings are submerged, with minimal to low ML/ARD potential to adversely affect groundwater quality [Score 5: Minimal to low risk to groundwater quality]. Candidate 7 (Filtered Tailings/Submerged PAG/NAG3) - PAG rock is submerged, reducing ML/ARD potential to adversely affect groundwater quality. However, filtered tailings are stored in a sub-aerial manner and therefore has moderate ML/ARD risk and potential to affect water quality in the surface pond, resulting in moderate risk to groundwater quality [Score 3: Moderate risk to groundwater quality]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3)- PAG rock is deposited with tailings; all PAG rock and most of the tailings remain saturated, reducing ML/ARD potential to adversely affect groundwater quality. Low to moderate ML/ARD risk and potential to adversely affect water quality in pond, due to exposure time of tailings operationally, resulting in low to moderate risk to groundwater quality [Score 4: Low to moderate risk to groundwater quality]. Candidate 22 (Filtered Tailings/PAG/NAG3) - PAG rock and filtered tailings stored in a sub-aerial manner have greatest potential for ML/ARD; high risk of poor quality water adversely impacting groundwater quality.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1507	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Groundwater - Groundwater quantity	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Groundwater - Seepage Quantity: Quantity of water impounded against dams may be reduced dependent on alternative tailings deposition within each Candidate. Furthermore, higher solids content in tailings may serve to reduce total seepage quantities (i.e.., there is less free water and interstitial water in thicker tailings to contribute to seepage).	Section 7.2.3 (Groundwater quantity) indicates that the "Upstream diverted catchment area has been used as a metric for assessing changes in groundwater flow between the candidates." Thus, the characterizations have not been revised in the May 2022 Alternatives Assessment report. However, based on the characterizations provided, the scoring for Candidate 1 has been revised to a score of 2 - Moderate to high risk to groundwater quantity. Scale: 6 - Diverted Catchment < 10 km2 5 - Diverted Catchment > 10 and < 20 km2 4 - Diverted Catchment > 20 and < 30 km2 3 - Diverted Catchment > 30 and < 40 km2 2 - Diverted Catchment > 40 and < 50 km2 1 - Diverted Catchment > 50 km2 Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Two large ponds potentially increase flow through and beneath dam. However, a large dam with engineered groundwater cut-off reduces groundwater contribution to creek flow; diverted catchment = 45 km2 [Score 2 - Diverted Catchment > 40 and < 50 km2]. Candidate 7 (Filtered Tailings/Submerged PAG/NAG3) - Large pond and close to dam potentially increases flow through and beneath dam. However, a large dam with engineered groundwater cut-off reduces groundwater contribution to creek flow; diverted catchment = 30 km2 [Score 3 - Diverted Catchment > 30 and < 40 km2]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3)- Pond close to dam potentially increases flow through and beneath dam. However, a large dam with engineered groundwater cut-off reduces groundwater contribution to creek flow; diverted catchment = 43 km2 [Score 2 - Diverted Catchment > 40 and < 50 km2]. Candidate 22 (Filtered Tailings/PAG/NAG3) - Significantly smaller pond and dam unlikely to affect groundwater contribution to creek flow; diverted catchment = 22.5 km2. [Score 4 - Diverted Catchment > 10 and < 20 km2].	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1508	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Fish, Fish Habitat, and Aquatic Resources - Risks to fisheries and aquatic resources	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Fish, Fish Habitat, and Aquatic Resources - Risks to fisheries and aquatic resources: Additional justification for scoring is required. Candidate 1 and Candidate 10 have similar footprints in watersheds but different scores.	The risks to fisheries and aquatic resources were assessed for each candidate using the rationale provided in Section 7.2.3: "Risk to fish species and aquatic resources result from potential changes to downstream water quality and water quantity. Risk from water quantity changes will be mitigated by augmenting flow in Davidson Creek with water discharged from the freshwater reservoir. Water quality changes may result from poor quality runoff and seepage entering downstream creeks. The potential for poor quality water are greater for candidates that store PAG materials on land." Therefore, the difference between Candidate 1 [Score 6: Minimal risk] and Candidate 10 [Score 5: Minimal to low risk] is related to the quality of potential uncaptured seepage originating from the tailings. The central discharge location and 1.5% beach slope for the paste tailings will result in increased exposure time of tailings compared to thickened tailings, and will therefore lead to poorer pond and seepage quality.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1508	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Fish, Fish Habitat, and Aquatic Resources - Risks to fisheries and aquatic resources	Technical	LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	We remain confused in respect of the justification for scoring of Candidate 22. The candidate PAG stockpiles based solely on the presence of the PAG stockpiles. This logic is not consistent with the fact that the presence of TSF toe seepage collection systems is scored postiively .	Canadidate 22 includes filtered stacked PAG tailings plus on-land PAG waste rock. No attempt to prevent the onset of ARD/ML is considered in this candidate. As indicated in the response to the Round 1 comment, the risk to fisheries is tied to potential changes to downstream water quality. While TSF seepage will occur from all candidates, those concepts that prevent the degredation of water quality from the tailings and PAG waste rock (i.e. sub-aqueous storage) will have less opportunity to result in a degradation of water quality downstream.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1509	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Wildlife and Wildlife Habitat	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Wildlife and Wildlife Habitat - Toxicological risk sto migraty birds, amphibians, and bats: Additional justification of the differences in scoring between Candidate 1 and Candidate 10 is required.	The descriptions for Candidate 1 and Candidate 10 have been revised in the May 2022 Alternatives Assessment report as follows to justify the difference in scoring for toxicological risk to migratory birds, amphibians and bats: Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Minimal to low toxicological risk. Water quality in supernatant ponds will have minimal to low risk of degradation due to the presence of a cyanide destruction circuit in the mill, lime neutralization circuit for the LGO stockpile and ML/ARD, because PAG rock co-disposed sub-aqueously with tailings. Size of ponds could temporarily attract migratory waterbirds, but due to the treatment proposed, risk of adverse effects remains low. [Score 5 Minimal to low toxicological risks]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3)- Low potential for toxicological risk. Water quality in supernatant ponds will have low risk of degradation due to the presence of a cyanide destruction circuit in the mill, lime neutralization circuit for the LGO stockpile and ML/ARD, because PAG rock co-disposed sub-aqueously with tailings. The central discharge location and 1.5% beach slope for the paste tailings will result in increased exposure time of tailings compared to thickened tailings, and will therefore lead to an increased risk of poor pond water and seepage quality that may affect migratory birds, amphibians and bats if metals accumulate in wetland vegetation. Size of ponds could temporarily attract migratory waterbirds, but due to the treatment proposed, risk of adverse effects remains low. [Score 4 Low toxicological risk].	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1510	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Wildlife and Wildlife Habitat	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Wildlife and Wildlife Habitat - Toxicological risk to terrestrial wildlife species: Additional justification of the differences in scoring between Candidate 1 and Candidate 10 is required.	The descriptions for Candidate 1 and Candidate 10 have been revised in the May 2022 Alternatives Assessment report. The following justification of the difference in scoring for toxicological risk to terrestrial wildlife species is provided: Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Minimal to low toxicological risk associated with low potential for dust generation from thickened tailings and minimal to low risk of degradation to supernatant pond water quality and associated seepage to downstream wetlands/creeks due to ML/ARD. [Score 5: Minimal to low toxicological risks]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3) - Low toxicological risk associated with low to moderate potential for dust generation from paste tailings and minimal to low risk of degradation to supernatant pond water quality and associated seepage to downstream wetlands/creeks due to ML/ARD. [Score 4: Low toxicological risk].	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1511	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Current use of lands and resources for traditional purposes - Lhoosk'uz Dene Nation (LDN)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Current use of lands and resources for traditional purposes - Lhoosk'uz Dene Nation (LDN) - Quality of resources harvested by Indigenous Groups: Further justification of the differences in scoring required between Candidate 1 and Candidate 10.	The descriptions for Candidate 1 and Candidate 10 have been revised in the May 2022 Alternatives Assessment report as follows to justify the difference in scoring for current use of lands and resources for traditional purposes - Lhoosk'uz Dene Nation (LDN) - Quality of resources harvested by Indigenous Groups: Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Alternative has minimal toxicological risk associated with low potential for dust generation from thickened tailings and minimal to low risk of degradation to supernatant pond water quality and associated seepage to downstream wetlands/creeks due to ML/ARD, which may affect the quality of resources harvested by LDN. [Score 6: Minimal toxicological risk from dusting and downstream water quality]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3) - Alternative has minimal to low toxicological risk associated with low to moderate potential for dust generation from paste tailings and minimal to low risk of degradation to supernatant pond water quality and associated seepage to downstream wetlands/creeks due to ML/ARD, which has potential to affect the quality of resources harvested by LDN. [Score 5: Minimal to low toxicological risk from dusting and downstream water quality].	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1512	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Current use of lands and resources for traditional purposes - Ulkatcho First Nation (UFN)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Current use of lands and resources for traditional purposes - Ulkatcho First Nation (UFN) - Quality of resources harvested by Indigenous Groups: Further justification of the differences in scoring required between Candidate 1 and Candidate 10.	The descriptions for Candidate 1 and Candidate 10 have been revised in the May 2022 Alternatives Assessment report as follows to justify the difference in scoring for current use of lands and resources for traditional purposes - Ulkatcho First Nation (UFN) - Quality of resources harvested by Indigenous Groups: Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Alternative has minimal toxicological risk associated with low potential for dust generation from thickened tailings and minimal to low risk of degradation to supernatant pond water quality and associated seepage to downstream wetlands/creeks due to ML/ARD, which may affect the quality of resources harvested by UFN. [Score 6: Minimal toxicological risk from dusting and downstream water quality]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3) - Alternative has minimal low toxicological risk associated with low to moderate potential for dust generation from paste tailings and minimal to low risk of degradation to supernatant pond water quality and associated seepage to downstream wetlands/creeks due to ML/ARD, which has potential to affect the quality of resources harvested by UFN. [Score 5: Minimal to low toxicological risk from dusting and downstream water quality].	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1513	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Human Health	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Human Health - Potential Health Risks: Recommend revisiting difference of ML/ARD risks between Candidate 1 and Candidate 10. Furthermore, recommend evaluating dust generation potential and requirements for dust control between slurry and paste tailings.	The descriptions for Candidate 1 and Candidate 10 have been revised in the May 2022 Alternatives Assessment report as follows to justify the difference in scoring for potential health risks: Candidate 1 (Thickened - Slurry Tailings/Submerged PAG/NAG3) - Minimal to low potential human health risks. Minimal to low potential for dust inhalation and effects of dust deposition on country foods, as thickened tailings are deposited at a 50% solids content from multiple spigots. Low risk to drinking water quality, as thickened tailings and waste rock are co-disposed sub-aqueously, reducing adverse effects from ML/ARD. [Score 6: Minimal to low risk to air quality, drinking water quality and country foods]. Candidate 10 (Paste Tailings/Submerged PAG/NAG3) - Low potential human health risks. Low to moderate potential for dust inhalation and effects of dust deposition on country foods, as paste tailings are deposited from a central discharge location with a 65% solids content and beach slope of 1.5%, thus having less retained moisture and the potential for increased dusting compared to the thickened slurry technology. Low risk to drinking water quality, as most paste tailings and waste rock are co-disposed sub-aqueously, reducing adverse effects from ML/ARD. [Score 5: Low risk to air quality, drinking water quality and country foods].	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1514	Chapter 3 Failure Modes Effects Assessment Failure Modes and Effects Assessment, Appendix A, Table 1	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Risk No. 21 : Risk description includes "low NAG waste rock/overburden production for dam construction". This risk is applicable to all Candidates in the Alternatives Assessment, and is a crucial constructability item. Key Defensive Measures in Place includes "waste rock and overburden materials used for construction of dams based on detailed mine waste model", and Key Defensive Measures To Be Applied to Permitting include "Annual review by EOR will consider changes to the site and potential impacts to design". The Classification is Medium. There are no additional mitigation measures, and under Additional Contingency Measures, there is "establish extension of reclaim water system to open pit for emergency drawdown of the TSF pond". There are no measures that relate to construction material availability risk reduction, however, the Mitigated Classification is ranked as Very Low.	The risk description is related to inadequate tailings pond capacity or excessive water resulting in need to discharge because of an inability to recognize and respond to changes. This ID is all about too much water and insufficient capacity to manage it, without having to have an emergency/unplanned discharge to the receiving environment. Planning ahead to understand construction volumes for dam construction is a defensive measure, as stated. The contingency measure about a reclaim water system to the open pit will therefore reduce the risk for this ID, as it is written.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1514	Chapter 3 Failure Modes Effects Assessment Failure Modes and Effects Assessment, Appendix A, Table 1	Risk	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The above comment is referring to risk ID 21 located in Table 1 of Appendix A in which the risk is stated as "Inability to recognize and respond to changes at the site (e.g. increased disturbance area, low NAG waste rock/overburden production for dam construction, climate conditions consistently wetter than average, extended mine life): inadequate tailings pond capacity or excessive water resulting in need to discharge tailings pond supernatant to receiving streams", which is not consistant with the Risk ID 21 risk description given in Table 2.2 stated as "Inadequate tailings pond capacity or excessive water resulting in need to discharge tailings pond supernatant to receiving streams" Please address the discrepency between these risk classifications and provide rational for the mitigated classification being ranked as "Very Low"	Tables 2.2 and 3.2 (Appendix H of Appendix 3-M) list the risk description for Risk ID 21 as 'Inadequate tailings pond capacity or excessive water resulting in need to discharge tailngs pond supernatant to receiving streams'. Note that Sections 2.2.1 and 3.4 state that these are summaries or abbridged versions of the details in Table 1 (Appendix A of Appendix H of Appendix 3-M). The risk description in Table 1 is the same, but for a more detailed list of examples that can lead to 'Inadequate tailings pond capacity or excessive water resulting in need to discahrge tailings pond supernatant to receiving streams'. No discrepency exists. The rational for the risk rating can be found in description of the key defensive measures in place, key defensive measures to be applied in permitting and additional contingency measures that are listed in Table 1 (Appendix A of Appendix H of Appendix 3-M), as well as in the response to the reviewer's Round 1 comment.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1515	Chapter 3 Engagement June 15, 2015 Meeting Minutes		LDN/UFN		Jun 11, 2022	1	New		No	MEM questioned at what point tailings would not be liquefiable, and KP replied that the liquefaction potential would always be a problem, given the grain size, saturation, density, and earthquake characteristics. Leaving liquefiable material behind in perpetuity as part of the mine / closure plan is not socially responsible, and implies that Artemis will always be liable for monitoring / maintenance of TSF C and TSF D, since they can never be fully reclaimed. There are no documented accommodations for care and maintenance in perpetuity, as a release from either TSF has the potential to seriously influence Tatelkuz Lake, which is an important part of traditional use for LDN.	The current design of the TSF has Main Dam C buttressed by a significant volume of waste rock, which is a substantive design improvement and risk reduction from the design that was part of the alternatives assessment that went through the EA. Suggest the current (detailed) design be used as a starting place to address this observation.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1516	Chapter 3 Engagement June 15, 2015 Meeting Minutes		LDN/UFN		Jun 11, 2022	1	New		No	KP indicated that a catastrophic breach of an impoundment holding waste rock only would move waste rock into the downstream environment, but would settle out more quickly than if it were tailings. However, the proposed impoundments incorporate both thickened tailings and waste rock. Therefore, the settlement time would be extended in the event of a catastrophic failure. It is not clear who will still be on-site (or liable) if this failure happens in the post-closure period.	Noted. Post-closure responsibility and liability is an important discussion topic that involves EMLI, given that they are responsible for administering permits under the *Mines Act* . BW Gold expects to continue these discussion topics with LDN & UFN during the joint Application review.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1517	Chapter 3 Alt Tech Options Study Section 5.2.4 Closure		LDN/UFN		Jun 11, 2022	1	New		No	The closure plan proposed for Option 1 implies care and maintenance in perpetuity, with allocation for only 20 years of engineering review and inspection in the closure period. There is no accommodation to mitigate the potential for liquefiable tailings and therefore the ongoing liability issues for Artemis.	Care and Maintenance is assumed to be a defined period, followed either by re-starting the mine, or moving to full closure. BW Gold has developed a Care and Maintenance Plan (pursuant to Condition 11 of the Environmental Assessment Certificate for the Blackwater Gold Project; March 2022), and further details are also being evaluated to better inform questions around care and maintenance. Suggest the current (detailed) design be used as a starting place to discuss questions about care and maintenance, long-term liability, liquefaction potential, etc...	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1518	Chapter 3 Alt Tech Options Study General		LDN/UFN		Jun 11, 2022	1	New		No	Why was UFN not consulted?	As indicated in Section 3.3 (Engagement): The Assessment of Alternatives for Blackwater Gold Project Tailings Storage Facility was provided to Indigenous Groups (including UFN) for comment as part of the Environmental Assessment in October 2015. An Evaluation of Alternative Tailings Technologies for the Blackwater Project was provided in December 2015, which included the high-level risk assessment. On October 8 and 13, New Gold presented to Indigenous Groups the results of the pre-screening assessment, MAA and Failure Modes and Effects Assessment (FMEA), and reviewed new design elements and contingencies that had been identified based on the evaluation. The UFN (represented by Source Environmental, Keefer Environmental Services and Swanson Environmental Strategies Ltd.) attended the June 7, 2017 Meeting (see Appendix D of the report), at which the Tailings Alternatives Assessment and the Multiple Accounts Analysis were presented. The UFN were also provided a copy of the February 2021 version of the Blackwater Gold Project Assessment of Alternatives for Mine Waste Disposal for comment in June 2021, and meetings were held in July 2021 with ECCC, UFN, LDN and CFSN to discuss the report content.	No	LDN/UFN	Lorax		Copied from AA Appendix A-7	GM	Ready for Submission	RT; June 14	Ready for Publishing
1519	Chapter 3 NAG Waste Rock and Overburden AA Section 7.2.1 Physical Stability Account		LDN/UFN		Jun 11, 2022	1	New		No	Location of water storage - were no options considered where there was not free water over the PAG waste? It is possible to have saturated material without standing water.	A total of 23 reasonable, conceivable and realistic candidates were developed that considered location, tailings technology and strategies to manage PAG/ML waste rock. There were 14 filtered tailings options (5-9, 14, 16-22) and three options for managing PAG/ML waste rock on-land (20, 22-23). Each of these options listed consider managing tailings and/or PAG/ML waste rock without a standing pond of water. Following the pre-screening and a high-level risk assessment, there were four candidates brought forward to the multiple accounts analysis (MAA; including a filtered tailings and on-land option for PAG/ML waste rock – Candidate 22). Removing the pond from the TSF following closure while still maintaining saturation may be possible. It would require adjustments to the closure and reclamation plan as currently presented in the MAA candidates. The closure plan for each candidate balances geochemical and geotechnical risks. A dry or partial-dry closure is generally preferrable from a geotechnical perspective and could likely be achieved with good planning. However, a dry closure plan would require careful consideration from a geochemical perspective.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 26	Ready for Publishing
1520	Chapter 3 NAG Waste Rock and Overburden AA Table 7.2-3 Technical Characterization Criteria Summary		LDN/UFN		Jun 11, 2022	1	New		No	The closure characterization criteria do not address the fact that while these candidates have closure plans, they do not allow for total reclamation and removal of liability as the potential for catastrophic tailings failures that would influence Tatelkuz Lake and the people living nearby remains as long as the tailings are in place. All of these closure plans do not allow for progressive closure of dam faces, and in fact would not even incorporate the dam faces into the returning land use objective for the site since nothing larger than grasses can be grown in the proposed cover to maintain the integrity of the slope.	The alternatives assessment considers indicators that are differentiating and, while long-term risk from the site can be reduced, it will remain for all candidates in some form. Hence, no closure indicator relating to tailings failures was included in the assessment. Closure concept descriptions were developed for the alternatives assessment, which were deemed sufficient to identify differentiating factors that would result in a range of scores and therefore provide insight into the merits of one candidate over another for closure. Detailed and optimized closure concepts would be the subject of future designs for candidates that advance. The detailed design for the project, conceptually described as Candidate 1, has had a great deal more design and assessment conducted on it to support the joint Mines Act and Environmental Management Act permits Application. The modelling done since this alternatives assessment resulted in the incorporation of the membrane WTP, as this work occurred after the publishing of the Alternatives Assessment report. Note that the Alternative Assessment is conceptual in nature.	No	LDN/UFN	ERM			RT	Ready for Submission	RT: June 25	Ready for Publishing
1521	Chapter 3 NAG Waste Rock and Overburden AA Table 7.2-3 Technical Characterization Criteria Summary		LDN/UFN		Jun 11, 2022	1	New		No	Candidate 1 does not indicate the potential for long-term water treatment, and yet a membrane water treatment plant is the proposed way to manage water quality post-closure.	For all candidates, water treatment is proposed through closure and as identified in Section 7.1 (Detailed Descriptions). However, at the time of the alternatives assessment (based on the 2020 prefeasibility study), the long-term water treatment for Candidate 1 was not proposed. Under the technical account, the long-term maintenance and monitoring was considered in terms of length of monitoring and the number of structures that require monitoring. Thus, if adding the long-term water treatment through Post-Closure for Candidate 1 (similar to Candidate 22), there would be a lower score associated with this closure concept indicator. However, looking at the sensitivity analysis in Section 10 of Appendix 3-M, the conclusions of the alternatives analysis would not have changed.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission		Ready for Publishing
1522	Chapter 3 Assessment of Alternatives for Mine Waste Table 7.2-4 Environmental Characterization Criteria Summary		LDN/UFN		Jun 11, 2022	1	New		No	There are alternatives for PAG storage on land that do not lead to ML/ARD, and don't introduce liability to the proponent in perpetuity in the shape of a dam.	Without further description of alternatives for PAG storage on land that do not lead to ML/ARD, we cannot respond to the comment further. We note that best practice for managing PAG materials has been sub-aqueously or in a saturated manner. The application of engineered covers also has a growing body of technical data that provides new opportunities to consider. However, given that there are also PAG tailings that must be managed, a retaining structure for tailings management is still required.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1523	Chapter 3 Engagement Appendix D-2: Federal Agency Comments on the 2015 Evaluation of Alternative Tailings Technologies for the Blackwater Gold Project		LDN/UFN		Jun 11, 2022	1	New		No	Unclear why water would still need to be stored elsewhere on-site if it can be decanted from the tailings impoundment. Can the water balance be adjusted to accommodate this additional water? The removal of retaining structures is the best and safest closure alternative.	The process plant has design water volume requirements to operate. If the primary source of water will not come from the TSF, then it must come from another source of sufficient volume to meet the process plant needs. For mine operations in northern climates, where there is limited surface flows in the winter and continuous months of freezing temperatures lock up available water as ice, a substantive volume of water is typically required to be stored prior to entering the winter months, so as to provide full process plant needs until spring freshet and a recharge of the water source for the process plant. Under the Paste tailings option, if water was decanted off the tailings surface as described during this discussion, then a separate water management pond would be needed to provide the operational volume required to meet the process plant design criteria.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1524	Chapter 3 PDF P.39	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Candidate 1, and 2 eliminate streams, decreasing instream habitat at Davidson Creek. Provision stated (Page 38 of NI 43-101 Technical Report on Pre-Feasibility Study) to pump water from Tatelkuz lake to supplement flows to Davidson Creek to meet instream flows for fish. Is there an issue pumping water from Tatelkuz Lake, and is there a long term plan in place meeting flow requirements at Davidson Creek?	The comment is not applicable to the Alternatives Assessment for NAG waste rock and overburden disposal because the preferred TSF candidate will be the primary infrastructure to decrease flows at Davidson Creek (with the waste stockpiles contributing to the reduction). The risks to fisheries and aquatic resources assumes that reductions in water quantity will be mitigated by augmenting flow in Davidson Creek. The Joint *Mines Act / Environmental Management Act* Permits Application provides details regarding pumping water from Tatelkuz Lake and the long-term plan to meet instream flow needs in Davidson Creek based on the preferred Candidate 1 Tailings Storage Facility and the preferred Candidate 1 for NAG Waster Rock and Overburden stockpile.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1525	Chapter 3 NAG Waste Rock and Overburden AA 4.1.1.2: Environment	Technical	LDN/UFN		Jun 11, 2022	1	New		No	The two considered candidates, 1 and 2, both propose WR stockpiles near the pit edge. Will this impede on the option for further expansion of the open pit? Each candidate is scored on opposite sides of the spectrum for expansion potential with no rationale as to why they're scored this way	There is no appreciable difference to pit expansion between these two candidates. The 'Expansion Potential' indicator relates the potential for more waste rock storage in a given facility. The single facility (Candidate 2) is managing the same volume of waste as two separate facilities (Candidate 1). Thus, there is greater potential to expand each of the dual facilities that are each containing less material than the single facility.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1525	Chapter 3 NAG Waste Rock and Overburden AA 4.1.1.2: Environment	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	The related comment is referring to that fact that stockpiling waste rock near the pit edge may infringe on further proposed pit expansion, not waste rock dump expansion.	The Round 1 comment for 1525 made a statement about the proximity to the open pit of the stockpiles for Candidates 1 and 2, and the possibility for those stockpiles to impede on expansion potential of the open pit. The Round 1 comment went on to the state that the scores for each Candidate were on opposite sides of the spectrum with no rational for why this is the case. The Round 1 response was focused on clarifying that, the indicator referred to in this comment was 'Expansion Potential' of the stockpile itself; not expansion of the open pit (Table 4.2-1). The Round 1 response went on to provide the explanation of why the two candidates were scored differently for this indicator. The response stands. With respect to the comment about the stockpile locations affecting potential pit expansion, note that this was not an indicator developed as part of the alternatives assessment for NAG waste rock and overburden stockpiles. Nevertheless, if it were considered, it would be non-differentiating, as both candidates are in similar proximity to the proposed pit, as noted by the reviewer.		LDN/UFN	KP	ERM	Greg	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
1526	Chapter 3 NAG Waste Rock and Overburden AA Table 4.2-1	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Active treatment of TSF to continue until water meets permit limits and can be discharged. No date given due to uncertainties in modelling centuries into future. BC MOE pointed out it was a 17 year mine with perpetual water treatment, and is not acceptable. Seems to be a lack of agreement within the group on whether ML/AMD will increase or decrease over time, how long that time frame is, how it should be modelled, and how long active treatment will be required. Has further work been done on this?	The meeting referred to by the reviewer was in June 2017 and, since the discussion, there has been Project Optimizations, adjustments to water treatment technologies and updates to water quality models. These have been documented through the submission of The Joint Mines Act / Environmental Management Act Permits Application in April 2022 and the federal submission of the Optimizations to Blackwater Gold Project Design in February 2022. Furthermore, the project received positive federal and provincial EA decisions to which LDN and UFN consented in 2019, with long-term active water treatment as part of the project plan.	No	LDN/UFN	Lorax		Copied from AA Appendix A-7	GM	Ready for Submission	RT; June 14	Ready for Publishing
1527	Chapter 3 Engagement Day 1 Meeting Minutes: Issue 2 - Duration of Water Treatment (p. 46)	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Why was the use of an engineered soil cover not considered for any of the options brought forward? KP recognizes that monitoring into perpetuity and perpetual water treatment are required with the four discussed candidates. All options are limited to saturated tailings and a TSF that will require perpetual care.	Management of PAG/NAG3 waste rock and tailings in a sub-aqueous or saturated manner was considered the best method for managing ML/ARD from the waste materials. The closure concepts describe the placement of NAG tailings and/or overburden to achieve these long term closure concepts. Engineered soil covers could be considered to minimize oxidation of the underlying materials to achieve this objective. This would likely result in similar relative scoring results for the closure indicators, where the candidate with the highest risk to ML/ARD (Candidate 22), would continue to have the lowest score, due to the additional challenge of preventing ML/ARD risk only from an engineered cover (whereas the other three options also include storage of PAG/NAG3 waste rock behind a water-retaining dam).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1527	Chapter 3 Engagement Day 1 Meeting Minutes: Issue 2 - Duration of Water Treatment (p. 46)	Technical	LDN/UFN (OKane_Mike O'Kane)		Jul 22, 2022	2	Follow Up	Information Requirement	No	How would a cover system over a thick layer of tailings influence geochemical stability (oxidation, for example) of PAG rock covered by many meters of tailings?	BW Gold appreciates the comment related to the potential to apply an engineered cover to achieve long-term geochemical stability. As discussed in the August 10th meeting with EMLI and LDN/UFN as it related to reclamation and closure of the TSF, BW Gold has proposed reclamation research trials (Chapter 4 of the Application) to evaluate engineered cover options for the TSF.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing

1527	Chapter 3 Engagement Day 1 Meeting Minutes: Issue 2 - Duration of Water Treatment (p. 46)	Technical	LDN/UFN (OKane_Mike O'Kane)		Sep 06, 2022	3	Follow Up		Yes	As per discussion during the Trilateral Meeting of August 10, 2022 (see PDF file: '10-Aug-22_MRC - Trilateral Discussion_TSF cover and WB.PDF', slide 7 to slide 9 (meeeting recording from the ~37min mark to the ~52min mark), there is a connection to be evaluated between the surface infiltration rate for the TSF, and the position of the phreatic surface within the tailings mass (i.e. the pore-water pressure regime). Discussion highlighted that further work is required to evaluate this connection and its potential influnece on TSF surface runoff water quality, TSF seepage water quality, and geotechnical stability during closure. The discussion also included the influence between 'global' TSF geochemical stability and geotechnical stability as a result of the phreatic surface position within the tailings mass. The project reviwer recommended that a failure modes and effects analysus workshop (FMEA) would be beneficial in evaluating this balance such that all perspectives coudl be evaluated at the same time. The reviwer's position is that ultimately, results, or outcomes, from field trials, will result in decisions in respect of the 'final' design for the cover system(s). Furthermore, decisions are required in respect to the non-technical and technical objectives, and therefore the design of the field trials themselves. Furthermore, risk-based decisions in respect to closure of the TSF, of which the cover system is a key component thereof, is foundational to developing Free, Prior, and Informed Consent (FPIC). We recommend that the proponent consider that decisions on cover system design, cover system field trial objectives, and cover system field trial design are in fact 'risk-based' decisions, and that cover system field trials are required not to address 'uncertainty', but rather to address risk, and identify opportunity. Risk-based decisions arise when there is some information available, and some understanding of the outcome; this represents the case in respect of the proponents TSF cover system design. Risk can be managed; uncertainty is uncontrollable. Utilizing a risk-based approach for the planning, design, and exuection of cover system reserarch trials, well ahead of their implementation, will allow for FPIC to be realized in respect of the cover system and the design of cover system field trials, as it will allow for common understanding for probability (likelihood) ranges, consequence effect ranges, and timeframe ranges, and ultimately the risk profile for TSF closure. We recommend the Failure Modes and Effects Analysis (FMEA) approach, as mitigations undertaken	BW Gold acknowledges the recommendation, and agrees that the reviewers recommendation as related to permit conditions or inclusion within a management plan requires consultation with MMO.		LDN/UFN	BWG		Ryan	RT	Ready for Submission	RT; sept 6	Ready for Publishing
1527	Chapter 3 Engagement Day 1 Meeting Minutes: Issue 2 - Duration of Water Treatment (p. 46)	Technical	LDN/UFN (OKane_Mike O'Kane)		Oct 06, 2022	4	Follow Up		Yes	Requires follow up as per proponents Round 3 response comment	BW Gold stands ready to engage in discussions on permit conditions when that process is commenced by MMO. Additionally, BW Gold has made a proposal to LDN and UFN in regards to a permit condition regarding an FMEA on the project's closure condition. BW Gold is interested in further disucssion on its proposal.		LDN/UFN	BWG		Ryan		30-Oct-22	RT; Nov 12, 2022	Ready for Publishing
1527	Chapter 3 Engagement Day 1 Meeting Minutes: Issue 2 - Duration of Water Treatment (p. 46)	Technical	LDN/UFN (OKane_Mike O'Kane)		Dec 01, 2022	5	Follow Up		Yes	We appreciate BW Gold's commitment to engage on the issue associated with this comment. We look forward to supporting MMO in developing an appropriate permit condition.	Comment noted and no further action required by BW Gold at this time.		LDN/UFN	BWG					RT; ndec 2	Ready for Publishing
1528	Chapter 3 Alt Tech Options Study General	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Public recreation was scored based exclusively on Moderate Significant / High Sensitivity areas disturbed. There is no consideration given to the Moderate Sensitivity / Moderate Significance areas that are disturbed. Both should be taken into account when evaluating public significance	The May 2022 Alternatives Assessment report includes the indicator 'Moderate Sensitivity/Moderate Significance'. The addition of the moderate sensitivity/moderate significance areas that are disturbed does not greatly affect the overall scores of the candidates in the quantitative analysis. Candidate 22 score increases with the lowest disturbance of moderate sensitivity/moderate significance area, while the others decrease in the May 2022 MAA. The scores for only the socio-economic account were revised. The changes are as follows with the update to add the second Public Recreation indicator: Candidate 1: 4.59 (updated) versus 4.74 (previous version) Candidate 7: 3.28 (update) versus 3.34 (previous version) Candidate 10: 3.77 (update) versus 3.92 (previous version) Candidate 22: 3.03 (update) versus 2.91 (previous version)	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1529	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Public Recreation p22	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Inclusion of ice and snow in tailings dam fill was assigned very low risk. If they plan ANY tailings dam construction in the winter, they will be placing material that has some frozen water in it. This will result in settlement.	Key defense measures and additional defense measures to be applied in permitting provide rationale for the scoring of this risk. Winter construction methods for dams of this type, in this climate and with these construction materials is commonplace in BC and elsewhere.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1529	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Public Recreation p22	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Please provide the key and additional measures that will be used during winter construction.	Preliminary procedures for winter construction practices are summized in Appendix E of Appendix 3-J (TSF Stage 1 Detailed Design Report). These procedures will be incorporated into and expanded upon for the Civil Technical Specifications supporting construction of the project facilities. The Civil Technical Specifications will be submitted to the EMLI Chief Inspector along with the Issued For Construction design drawings, as required by Part 10.5.1 of the Health, Safety and Reclamation Code for Mines in BC (2021), prior to construction of the TSF.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1530	Chapter 3 FMEA Table 1 p. A-2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Were the LDN / UDN consulted when conducting this FMEA? Surprised things such as a coffer dam failure resulting in sediment loading and dam materials going into receiving steams can be given the lowest impact score available. How can an uncontrolled landslide into the TSF be given a low impact score?	The results of the FMEA were presented to the working group during the EA in October 2015, which included members from LDN. Details of each risk description, defense measures in place, additional defense measures to be applied in permitting, the likelihood, impact, overall score and classification can be found in Tables 1.1 and 1.2, Figure 2.5, Table 2.2 and 3.2 and Figure 3.2 of the FMEA.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1530	Chapter 3 FMEA Table 1 p. A-2	Risk	LDN/UFN (OKane_Blake Weinrauch)		Jul 22, 2022	2	Follow Up	Comment	No	Consequence ratings for multiple risks need to be re-evaluated. Various risks resulting in uncontrolled release of tailings/sediments to nearby streams were given a consequence rating of "insignificant" or "minor", generally meaning that the environment would experience short term effects It is noted that the consequence rating is reduced for some risks as the effects would be contained to the ECD. However, any release of excess sediments, dam materials (incuding PAG rock, Risk 3), tailings (Risk 33), contaminated seepage (Risk 36, Risk 38) will have more than "short term effects" on the environment	Further response to this comment is not possible, as the initial commentary provided lacks specificity to which risk number(s) are being referred to. No supporting information has been provided to support the definitive nature of the statement provided in the second part of the comment; it appears to be an opinion only. It is worth noting that increasing the consequence ranking by one category for the stated risks in the comment (ID 3, 33, 36, and 38) would have no impact on the overall risk rating for these hazards.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1530	Chapter 3 FMEA Table 1 p. A-2	Risk	LDN/UFN (OKane_Blake Weinrauch)		Sep 01, 2022	3	Follow Up		No	The initial round 1 comments referring to the coffer dam failure resulting in sediment loading and dam materials entering recieving streams and uncontrolled landslides into the TSF was referring to Risk No.'s 3 and 19, respectively. The original comment was in reference to the impact score only. All of the mentioned risks over the last two rounds of review (Risk No. 3, 19, 33, 36, 38) have an impact score of 1 or 2. These impact scores correlate with limited/short term effects on the environment. The original comment intended to determine whether or not Artemis consulted with LFN/UDN members in regards to their interpretation of these consequence classifications. The Round 1 response indicated that members of the LDN were presented the results in October 2015, indicating that Free, Prior, and Informed Consent was provided. It was stated that the results of the FMEA were presented to the member of the LDN, not that they were involved in the development of consequence criteria. Artemis could consider including members of the First Nations groups when determining consequence classifications in the future, rather than only presenting results	The reviewers comment is noted with thanks.		LDN/UFN	BWG		Ryan	RT	Ready for Submission	RT; sept 6	Ready for Publishing
1530	Chapter 3 FMEA Table 1 p. A-2	Risk	LDN/UFN (OKane_Mike O'Kane)		Oct 06, 2022	4	Follow Up		Yes	This review comment has not been addressed as yet. A commitment to, not to, revisit the failure modes and effects analysis (FMEA) with LDN and UFN is required.	BW Gold has made a proposal to LDN and UFN in regards to a permit condition regarding an FMEA on the project's closure condition. BW Gold is interested in further disucssion on its proposal.		LDN/UFN	BWG		Ryan		30-Oct-22	RT; Nov 12, 2022	Ready for Publishing
1530	Chapter 3 FMEA Table 1 p. A-2	Risk	LDN/UFN (OKane_Mike O'Kane)		Dec 01, 2022	5	Follow Up		Yes	We appreciate BW Gold's commitment to engage on the issue associated with this comment. We look forward to supporting MMO in developing an appropriate permit condition.	Comment noted and no further action required by BW Gold at this time.		LDN/UFN	BWG					RT; dec 2	Ready for Publishing
1531	Chapter 3 FMEA General	Technical	LDN/UFN		Jun 11, 2022	1	New		No	Alternatives 8 and 9 are screened out due to impractical collection of surface waters, however, the description of the facility Table 5.1 or the plan view of the areas (Figure 5-1) do not have sufficient detail to justify the screening	Figures C-8 and C-9 of Appendix E-2 (KP 2015) are included in the May 2022 Alternatives Assessment report showing the layout of each Alternative, the topography and the challenges that would come from collecting surface waters from the filtered stacks in Alternatives 8 and 9. (KP. 2015. New Gold Inc. Blackwater Gold Project - Alternative Technology Options Study, VA101-457/15. Prepared for New Gold Inc. Vancouver, BC.)	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1532	Chapter 3 Assessment of Alternatives for Mine Waste Section 6.1.6	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Environmental Accounts - Sensitivity to Climate Change - Scoring criteria suggests that impoundments that store PAG material sub-aqueously are less sensitive to climate change, due to concerns about drought and the need to limit oxygen to PAG through maintenance of water cover. This suggests that the biggest impact from climate change on the mine site (WQ, stability, etc...) is perceived to be increased periods of drought. Is this in agreement with the project climate scenarios? Has perspective changed since the development of this document with more concern being placed on episodic extreme conditions such as rainfall events and flooding?	The description in Section 7.2.3 identifies both drought and the ability to manage high flows in extremely wet conditions as the two key aspects for this indicator. The more favorable scores reflect those candidates that manage PAG/NAG3 rock sub-aqueously, and also have the capacity to manage larger Inflow Design Floods and the PMF, thus speaking to more extreme events that are also associated with climate change. The perspectives on how to incorporate climate change remains consistent today (i.e.. more extreme periods of drought as well as extreme wet periods).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1533	Chapter 3 Assessment of Alternatives for Mine Waste Section 7.2.3	Risk	LDN/UFN		Jun 11, 2022	1	New		No	The risk classifications in Table 1.3 - Risk Classification and Figure 2.5 vary greatly, with Table 1.3 being closer to Okane's experience of a 'typical' risk matrix. No clear explanation of the change in risk classification is provided in the document.	Noted.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1534	Chapter 3 FMEA Section 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Based on classification scheme of Table 1.3 (assuming qualitative scoring rather than arithmetic) the preliminary ranking would be (classification in report and Figure 2.5): Very Low - 7 (20) Low - 21 (17) M - 5 (2) H - 6 (0) It is acknowledged that the probability and consequence rankings are unchanged, however, the application of a different classification in the risk matrix greatly changes the impression of the magnitude of the risk based on the altered verbiage	Noted.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1534	Chapter 3 FMEA Section 2.3		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	follow up	Information Requirement	No	The rationale for using the classification matrix is not provided. It is understood that the FMEA report is a 2015 document. Please document BW's expected timeline to revisit and update the FMEA.	BW Gold appreciates LDN/UFN interest in conducting an FMEA using the Nations' risk assessment framework. An FMEA has already been completed for the project and BW Gold is of the view that an additional FMEA is unwarranted and falls outside the scope of the Joint Application review.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	RT; aug 16	Ready for Publishing
1534	Chapter 3 FMEA Section 2.3		LDN/UFN (OKane_Lisa Axelson)		Sep 01, 2022	3	Follow Up		Yes	During ongoing discussions with KES/artemis/nations, it has become apparent that an updated FMEA with the nations is neccessary for developing closure strategies relating to the TSF and pit lake.	BW Gold acknowledges the comment. BW Gold expects that ongoing consultation on the Reclamation and Closure Plan (RCP), particularly as it relates to outcomes of the proposed reclamation research trials related to the TSF, and updated risk assessment related to refinements of the RCP and proposed Closure/Post-Closure water management, will address a number of these observations.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Sep 16	Ready for Publishing
1534	Chapter 3 FMEA Section 2.3		LDN/UFN (OKane_Mike O'Kane)		Oct 06, 2022	4	Follow Up		Yes	A committment to address the review comments is required.	BW Gold acknowledges this comment.		LDN/UFN	KP		Greg	TD	Ready for Submission	AT, Oct26	Ready for Publishing

1534	Chapter 3 FMEA Section 2.3		LDN/UFN (OKane_Mike O'Kane)		Dec 01, 2022	5	Follow Up		Yes	We appreciate BW Gold's commitment to engage on the issue associated with this comment, which BW Gold referenced in previous round's responses in respect of this comment. We look forward to supporting MMO in developing an appropriate permit condition with respect to conducting FMEA workshops that focus on credible potential failure modes associated with closure of the TSF, that would allow for enhanced collaboration and engagement with First Nations.	Comment noted and no further action required by BW Gold at this time.		LDN/UFN	KP					RT;	
1535	Chapter 3 FMEA Section 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Failure modes 9, 12, 13, 14 include failure of the dams and are given an overall risk ranking of Low. It is outside Okane's experience to see a Rare Probability - Catastrophic Consequence rated as Low. The risk ranking according to a qualitative ranking in Table 1.3 would result in a High ranking. Please provide explanation around assigning this FM's a Low risk ranking.	Key defense measures and additional defense measures to be applied in permitting provide rationale for the scoring of this risk. Winter construction methods for dams of this type, in this climate and with these construction materials is commonplace in BC and elsewhere.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1535	Chapter 3 FMEA Section 2.3		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Response does not clearly explain the rationale behind the Low risk rankings for the Failure modes. It is understood that the FMEA report is a 2015 document. Please document the rationale and BW's expected timeline for revisiting and updating the FMEA	As stated in Section 2.2.1 (Appendix H of Appendix 3-M), a working table was developed to outline each hazard category, phase of development, description of risk, key defensive measures in place, key defensive measures to be applied in permitting and the risk rating. Section 2 (Appendix H of Appendix 3-M) describes the risk mitigations incorporated in the design. Section 2.2 (Appendix H of Appendix 3-M) states that risk items with low and medium risk ratings are generally affected by water management, with potential for consequences of failiure improved or worsened by water management strategies. Table 1.1 identifies the Likelihood matrix; Table 1.2 identifies the Consequence matrix; and Table 1.3 clearly lists the risk classification that was established for this FMEA. All details are documented in this report (Appendix H of Appendix 3-M). Risk assessment for the design of the TSF will be an on-going activity. Additional risk assessment work will be completely progressively during on-going mine development. BW Gold appreciates LDN/UFN interest in conducting an FMEA using the Nations' risk assessment framework. An FMEA has already been completed for the project and BW Gold is of the view that an additional FMEA is unwarranted and falls outside the scope of the Joint Application review.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1536	Chapter 3 FMEA Section 2.2	Risk	LDN/UFN		Jun 11, 2022	1	New		No	Section discusses final risk rankings based on applied mitigations. In numerous occasions the consequence ranking is lowered without any meaningful mitigation to support it. Example - FM 9 - Preliminary scoring Consequence is 5 (Catastrophic). The final ranking discusses additional mitigations involving water management (affects Probability only) and the Consequence is changed to 3 with the resulting decrease in overall risk ranking. Please provide explanation behind this change in final ranking.	For Risk No. 9, the Impact (Consequence) is reduced by keeping the pond in TSF D minimal by pumping to TSF C, because, under this failure mode, the dam foundation fails, resulting in a collapse of Main Dam D. However, if there is very little to no water behind Main Dam D, the risk of an overtopping and erosive event leading to a release of stored materials from within the facility. Hence, this additional mitigation measure does not affect the likelihood of the collapse caused by the failed foundation, but rather the consequence.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1536	Chapter 3 FMEA Section 2.3		LDN/UFN (OKane_Dave Christensen)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Response does not adequately address the change in risk ranking, FM 9 references "TSF dam foundation failure: foundation movement resulting in collapse of Site D tailings dam". Surface water management to reduce the amount of water on the dam would not change the Consequence ranking produced by dam failure and spillage of the tailings mass. It is understood that the FMEA report is a 2015 document. Please document BW's expected timeline for revisiting and updating the FMEA	The presence of a pond and the potential for the tailings to liquify and flow are key parameters for determining the consequence of a dam failure and loss of containment (Martin, Al-Mamun and Small, CDA technical builletin on tailings dam breach analyses, ICOLD 2019). FM9 is stated as a dam foundation failure. Should this failure mode occur, a large pond behind the dam could overtop the failed dam, down-cut and release tailings and water. However, if there were minimal water behind Main Dam D, there is less opportunity for the dam to overtop, down-cut and release tailings and water. As noted in response to comment 1416, the dam at the Cadia Mine in Austrailia is a good example of a dam crest that slumped, but due to the proximiy of the pond from the crest, there was no release of water and minimal downstream consequences. Risk assessment for the design of the TSF will be an on-going activity. Additional risk assessment work will be completely progressively during on-going mine development. BW Gold appreciates LDN/UFN interest in conducting an FMEA using the Nations' risk assessment framework. An FMEA has already been completed for the project and BW Gold is of the view that an additional FMEA is unwarranted and falls outside the scope of the Joint Application review.		LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, Aug 13	Ready for Publishing
1537	Chapter 3 FMEA Section 3.5 / Appendix Table 1		LDN/UFN		Jun 11, 2022	1	New		No	Inconsistency throughout with capitalization of Open Pit.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1538	Appendix 3-O 1.3.2		LDN/UFN		Jun 11, 2022	1	New		No	A lined Water Management Pond (WMP) is located downslope of the open pit and stockpiles area and within the ultimate footprint of TSF C to manage runoff from contributing areas and water pumped from collection points.	Thank you for the editorial suggestion. The statement in the report is correct as written.	No	LDN/UFN	KP		Michael/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1539	Appendix 3-O 3.5.4		LDN/UFN		Jun 11, 2022	1	New		No	"Glacial Till – Ablation till occurs at surface with thickness ranging from 0.8 to 4.8 m on the abutments. Lodgment and undifferentiated till occur below and is interbedded with glaciofluvial and glaciolacustrine materials as described below." - this is repeated. delete.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Michael/Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1540	Appendix 3-O 3.5.4		LDN/UFN		Jun 11, 2022	1	New		No	FAIR' RMR89 Rating. - what is this rating based on? reference this.	Thank you for noting this. See Appendix 3-L for additional details. Rock mass quality was classified using the Rock Mass Rating (RMR89) (Bieniawski, 1989). The reference is as follows: "Bieniawski, Z.T., 1989. Engineering Rock Mass Classifications. Wiley, New York." BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Michael/Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1541	Appendix 3-O 3.5.6		LDN/UFN		Jun 11, 2022	1	New		No	Factor of safety defined (FoS) so be consistent in using the acronym throughout.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Michael/Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1542	Appendix 3-O 4.4		LDN/UFN		Jun 11, 2022	1	New		No	consider including information that relates to all diversion channels under the main heading to avoid repeating (i.e... Constructed in Year -1 and operating until year 6; collection channel design).	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Michael/Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1543	Appendix 3-V2 2.1.3		LDN/UFN		Jun 11, 2022	1	New		No	Such a layer would appear to be less than 50 m thick in the area of the Blackwater deposit. - based on?	The report provided in Appendix 3-V2 is superseded with the information provided in Appendix 2-J. Please refer to Appendix 2-J for details related to the interpretation of hydrostratigraphic units.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1544	Appendix 3-V2 2.2.4.3		LDN/UFN		Jun 11, 2022	1	New		No	the water level recovery following development of MW12-10D was insufficient to perform a test and MW12-10S was dry - is this installation error?	Monitoring well MW12-10S was installed in a wet zone screened across a sand and gravel unit overlying a lower permeability unit (reworked regolith). The well screen was positioned to assess if water is sitting on top of the regolith unit. Monitoring well MW12-10D was installed in competent bedrock. The permeability of the competent bedrock is low.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1544	Appendix 3-V2 2.2.4.3		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	provide supporting documentation of findings re: interpretation of whether MW12-10D contains water on top of the regolith.	The well screen and completion zone for monitoring well MW12-10D are located entirely in the moderately weathered bedrock horizon. The measured water level in MW12-10D is reported to vary between 7.7 and 10.8 mbgs, which is deeper than the reworked regolith horizon (5.2 to 7.6 mbgs) and therefore inference can only be made that groundwater is present in the bedrock. Monitoring well MW12-10S is screened in the overlying reworked regolith and is dry. The well screen and completion zone for MW12-10S extends from the base of the overlying glacial till through the top of the reworked regolith horizon and indicates the reworked regolith unit does not have measurable water sitting on top of it or within the upper portion of it.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1545	Appendix 3-V2 2.2.5		LDN/UFN		Jun 11, 2022	1	New		No	Both wells were developed after drilling and installation until the discharge water was clear of fines. - and parameters stabilized?	A record of in situ parameter values during well development was not maintained for these wells. Both PW13-01 and PW13-03 were developed until discharge water was clear of fines, which met the objectives established for the development of these pumping wells.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1546	Appendix 3-V2 2.2.6		LDN/UFN		Jun 11, 2022	1	New		No	Water level recovery was monitored in PW13-1 over a period of 2 weeks, at which time 95% recovery had not been achieved but the rate of recovery had been stable for 1 week. -is this consistent with expected recovery based on lithology, or is this a well installation/development issue?	The time required for pumping well PW13-1 to recover from the pumping test is aligned with the conceptual hydrogeological model for the higher permeability bedrock zone in the deposit area. Water was removed from storage during the test. Groundwater flow to the higher permeability zone was then limited by the surrounding lower permeability bedrock.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1547	Appendix 3-V2 2.3.1		LDN/UFN		Jun 11, 2022	1	New		No	A hydraulic conductivity value of <1x10-8 m/s has been estimated at monitoring well MW12-10D based on the very slow rate of water level recovery following well development. - how was this estimated if no response tests were conducted?	The slow water level recovery in the monitoring well MW12-10D indicates that the hydraulic conductivity of the screened interval is less than the lower limit of permeability values able to be measured using response tests. Therefore, a hydraulic conductivity value of <1E-8 m/s was assigned to the screened interval.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1547	Appendix 3-V2 2.3.1		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	provide documentation/justification that the estimate is reliable and not expected to be a completion error. Are there other wells in that unit that can be used to validate?	A hydraulic conductivity estimate of <1E-8 m/s for the moderately weathered bedrock in the screened interval at MW12-10D is within the range of hydraulic conductivity results for tests conducted in bedrock characterized as moderately weathered. Hydraulic conductivity testing statistics are summarized in Table 4.1 of Appendix 2-J. A total of 20 tests were completed in moderately weathered bedrock, consisting of 11 response tests and 9 packer tests. Six of the tests (30%) reported hydraulic conductivity estimates for the moderately weathered bedrock at or below 1E-8 m/s and an additional three tests (15%) are on the order of E-8 m/s. Permeabilities at the lower range of estimated values for the moderately weathered bedrock are consistent with the slow recovery of monitoring well MW12-10D following development. Monitoring well MW10-01D is screened in moderately weathered bedrock at a similar depth at MW12-10D (36 to 39 mbgs) and also has an estimated hydraulic conductivity of <1E-8 m/s.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Aug 11	Ready for Publishing
1548	Appendix 3-V2 2.3.3		LDN/UFN		Jun 11, 2022	1	New		No	Were packer tests identified to span the lower and higher permeability units excluded in developing estimates?	The section discusses results of airlifting and packer testing as the length weighted average hydraulic conductivity calculated for the entire drillhole. The only drillhole inferred to span both the lower and higher permeability zones is GM12-02 (Section 2.3.1 of Appendix 3-V2).	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1549	Appendix 3-V2 2.3.5		LDN/UFN		Jun 11, 2022	1	New		No	assumed porosity of 0.05% - should this be 5%?	No, the value stated in the report is within the expected range of values. The value is in reference to a bedrock unit.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1549	Appendix 3-V2 2.3.5		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, the original question/concern has not been adequately addressed. Please update the estimated porosity values to the correct units (0.05 = 5%, not 0.05%).	The value stated in the report text was used to calculate groundwater flow velocity and represents the effective porosity. The (effective) porosity value for the lower permeability bedrock unit is correct as stated in the report text (0.05%) and is within the range of values expected for the bedrock unit. An effective porosity of 5% is outside of the expected range of values for the bedrock unit based on characterization of the bedrock and published literature (e.g., Snow, D.T. 1968, Rock fracture spacing, openings, and porosities. Journal of Soil Mechanics and Foundations Division, Proceedings of the American Society of Civil Engineers, Vol. 94 No. SM1, January 1968).		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
1550	Appendix 3-V2 2.3.5		LDN/UFN		Jun 11, 2022	1	New		No	an assumed porosity of 0.2% - 20%?	No, the value stated in the report is within the expected range of values. The value is in reference to a bedrock unit.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1550	Appendix 3-V2 2.3.5		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Thank you for your comment, however, the original question/concern has not been adequately addressed. Please update the estimated porosity values to the correct units (0.2 = 20%, not 0.2%).	The value stated in the report text was used to calculate groundwater flow velocity and represents the effective porosity. The (effective) porosity value for the higher permeability bedrock zone is correct as stated in the report text (0.2%) and is within the range of effective porosity values expected for fractured bedrock. An effective porosity of 20% for fractured bedrock is outside the range of expected values based on characterization of the bedrock and published literature (e.g., Snow, D.T. 1968, Rock fracture spacing, openings, and porosities. Journal of Soil Mechanics and Foundations Division, Proceedings of the American Society of Civil Engineers, Vol. 94 No. SM1, January 1968).		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
1551	Appendix 3-V2 2.4		LDN/UFN		Jun 11, 2022	1	New		No	The mean annual precipitation at the site is estimated to be 636 mm - this isn't consistent with other reports and models (595 mm)	The Appendix 3-V2 report was authored in 2013. The record of climate data is longer in reports authored more recently; climate statistics are therefore inconsistent with older reports. Please refer to reports authored in 2021 for updated climate summaries, such as Appendix 2-B.	RT/TD to review	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1552	Appendix 3-V2 Appendix B		LDN/UFN		Jun 11, 2022	1	New		No	Justification for using Hvorslev instead of KGS or B-R?	Please see the response to Comment 1181.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1553	Appendix 3-V2 Appendix B		LDN/UFN		Jun 11, 2022	1	New		No	consider re-analysis of the solutions. Data could be filtered down more to improve estimates. Several solutions show what looks like logger displacement which hasn't been corrected for in the analysis.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1554	Appendix 3-V2 Appendix B		LDN/UFN		Jun 11, 2022	1	New		No	was data compensated for barometric effects?	Water level data in Appendices B1 and B2 is presented as "meters above transducer" and does not need to be corrected for barometric pressure. Pumping well water level data presented in Appendices B3 and B4 are manual water level measurements, as noted in the footnotes of the figures. Water level data reported at vibrating wire piezometers in Appendices B3 and B4 were not corrected for barometric pressure.	No	LDN/UFN	KP		Cindy/Dan	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1555	AEMP (Appendix 7-A) Figure 3.1-1:	Labelling	LDN/UFN		Jun 11, 2022	0			No	Please label the water quality station numbers so that there location can be referred to when checking tables	Labels for baseline and proposed sampling sites have not been provided in the Figure because the names of the proposed monitoring stations have been updated to reflect the creek/lake name (e.g. CC-10 is located on Chedakuz Creek; the baseline site name is WQ8). The reviewer is referred to Figure 4.2-1, which includes all proposed monitoring stations and AEMP components when confirming that all stations have been included in the tables.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; june 18	Ready for Publishing
1555	AEMP (Appendix 7-A) Figure 3.1-1:	Labelling	LDN/UFN		Jun 11, 2022	1	New		No	Labelled maps should still be provided for reference. Please update accordingly.	A table was provided in Attachment D of the Aquatic Effects Monitoring Program (AEMP) Plan (Appendix 7-A; March 2022) that indicates the AEMP site name, UTM, and the original baseline site names for water quality and aquatic resource sampling. The reason for changing the site IDs in the AEMP Plan was to standardize the site IDs moving forward, because the baseline programs for water quality and aquatic resources had different site names for the same site. BW Gold plans to compile all available baseline data from 2011 to 2022 into cumulative baseline reports upon completion of all AEMP baseline monitoring components (hydrology, surface water temperature, surface water quality, aquatic resource and fisheries). Baseline data will be compiled and standardized using the updated site names indicated in the AEMP Plan. This will ultimately eliminate any confusion in which data are applicable to a given site, or which water quality site matches an aquatic resources site. BW Gold anticipates cumulative baseline reports will be available by Q2 2023.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1556	AEMP (Appendix 7-A) Table 3.1-1:	Concentration guidelines	LDN/UFN		Jun 11, 2022	0			No	You should refer to a table of governmental guidelines for concentration thresholds, this should be in an appendix in this document (not in another document) to make it easy to check	The table reflects monitoring completed in 2020 and refers to the federal and BC guidelines current to 2020. Thus, to avoid confusion with future updates of the AEMP Plan, the reference to the baseline report is provided.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission		Ready for Publishing

1556	AEMP (Appendix 7-A) Table 3.1-1:	Concentration guidelines	LDN/UFN		Jun 11, 2022	1	New		No	Adding the most recent guidelines used for the monitoring within this plan (and updating the guidelines within the plan as necessary) is more efficient for the reader to reference. Please update.	Guidelines are updated periodically by the province (BC Ministry of Environment and Climate Change Strategy) or Canadian Council of Ministers of the Environment. Given the complexity involved in updating the Aquatic Effects Monitoring Program (AEMP) Plan, once it is approved, the intent is not to update the AEMP Plan each time a guideline is revised or a new guideline is issued. Therefore, a table of specific guidelines will not be provided in each update of the AEMP plan. However, in response to the reviewer's comment in Round 0, Attachment E was provided to include the 2020 provincial and federal guidelines (see Attachment E in Appendix 7-A, March 2022). Reports prepared annually with the results of the AEMP will include the numerical provincial and federal guidelines used in analysis and interpretation of the data. The numerical guidelines in an AEMP report will reflect the guidelines available at the time an AEMP report is prepared.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1557	AEMP (Appendix 7-A) Page 3.5	Explanation	LDN/UFN		Jun 11, 2022	0			No	Natural elevation of metal concentrations at this site can be attributed to the site's proximity to the Blackwater deposit. An explanation of why metal and other concentrations are elevated close to the deposit and in other stations is needed and what the implications of this are to aquatic monitoring and pollution. Understanding the processes that are causing the observed concentrations is important.	Section 3 of the AEMP Plan is intended to provide an overview of the existing conditions. The reviewer is referred to Chapter 2 of the Application for details regarding mineralization in proximity of the Blackwater deposit. The summaries have been revised as follows to indicate the metal exceedances attributed to the site's proximity: "Baseline monitoring at a site in upper Creek 661 adjacent to the footprint of the Open Pit thus had the greatest number of parameters with guideline exceedances for total and dissolved metals. Guideline exceedances for total and dissolved aluminum, total cadmium and total zinc observed persisted to the downstream monitoring sites in the Creek 661 watershed. Natural elevation of metal concentrations at this site can be attributed to the site's proximity to the Blackwater deposit. The reduced frequencies and factors of exceedance (or absence of exceedance) for total and dissolved cadmium, total silver and total zinc with downstream distance indicates that these parameters are likely associated with the mineral deposit and are attenuated along the Creek 661 flow path towards Chedakuz Creek. However, exceedances of aluminum, total chromium and total copper guidelines observed at all Creek 661 downstream sites (but not in upper Creek 661) suggest these metals are not associated with the mineral deposit."	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 27	Ready for Publishing
1557	AEMP (Appendix 7-A) Page 3.5	Explanation	LDN/UFN		Jun 11, 2022	1	New		No	The new wording provides adequate information as to the type of exceedances, however, describing the implications to aquatic monitoring and pollution (or a reference as to where it can be found) is still recommended.	Chapter 2 (Baseline Information) of the Application describes existing conditions; there are no aquatic monitoring or Project-related implications. The information presented represents baseline conditions. Therefore, any 'effects' to fish or aquatic biota would be reflected in the baseline characterizations provided in Section 2.9 of Chapter 2 or associated baseline reports for these biota.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1558	AEMP (Appendix 7-A) Figure 3.3-1:	Figure details	LDN/UFN		Jun 11, 2022	0			No	Please add labels to identify each monitoring station and in the figure text add the appendix or document where monitoring values can be found	Labels for baseline and proposed sampling sites have not been included, because the names of the proposed monitoring stations have been updated to reflect the creek/lake name (e.g. CC-10 is located on Chedakuz Creek; the baseline site name is WQ8). The reviewer is referred to Figure 4.2-1, which includes all proposed monitoring stations and AEMP components when confirming that all stations have been included in the tables.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission		Ready for Publishing
1558	AEMP (Appendix 7-A) Figure 3.3-1:	Figure details	LDN/UFN		Jun 11, 2022	1	New		No	Labels should still be added for referencing. Please update.	This comment appears to be the same as comment #1555. Please see response to Comment #1555.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1559	AEMP (Appendix 7-A) Figure 3.3-1:	Figure details	LDN/UFN		Jun 11, 2022	0			No	Please add labels to identify each monitoring station and in the figure text add the appendix or document where monitoring values can be found	Labels for baseline and proposed sampling sites have not been included, because the names of the proposed monitoring stations have been updated to reflect the creek/lake name (e.g. CC-10 is located on Chedakuz Creek; the baseline site name is WQ8). The reviewer is referred to Figure 4.2-1, which includes all proposed monitoring stations and AEMP components when confirming that all stations have been included in the tables.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 28	Ready for Publishing
1559	AEMP (Appendix 7-A) Figure 3.3-1:	Figure details	LDN/UFN		Jun 11, 2022	1	New		No	Labels should still be added for referencing. Please update.	This comment appears to be the same as comment #1555. Please see response to Comment #1555.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1560	AEMP (Appendix 7-A) Page 4.31	BACI analyses, statistical errors type 1 and type 2 errors, here and later	LDN/UFN		Jun 11, 2022	0			No	I understand that you do not want to set alarms off immediately if an increase in harmful substances is found but has not been confirmed, however the text suggests you are not controlling for type 2 errors sufficiently - by reducing statistical power and then only confirming a statistic is significant when an expert deems it so. It seems wise to double check when concentrations appear elevated despite the chance of a type 1 error. Please format the text to make it clear that you are using a precautionary approach and give a method to check all unusual readings either by subsampling or using field data confirmation.	The statement at section 4.5.1.3 has been revised as follows: "A precautionary approach will be used to determine if an effect is attributable to Project activities in cases of unexplained significant interactions (i.e., there is no Project related source) using professional judgement, additional sampling and/or field data to confirm significantly elevated or lower concentrations."	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	TD, Jun 27	Ready for Publishing
1560	AEMP (Appendix 7-A) Page 4.31	BACI analyses, statistical errors type 1 and type 2 errors, here and later	LDN/UFN		Jun 11, 2022	1	New		No	"A precautionary approach will be used to determine if an effect is attributable to Project activities in cases of unexplained significant interactions (i.e.., there is no Project related source) using professional judgement, additional sampling and/or field data to confirm significantly elevated or lower concentrations." Providing the example "i.e.., there is no Project related source" is redundant. The sentence stands true without the example, and removing it strengthens the emphasis that a non-bias approach will be taken when investigating unexplained significant interactions.	This comment was addressed to remove "i.e.., there is no Project related source" from the Section 4.5.1.3 of the Aquatic Effects Monitoring Program Plan (Appendix 7-A; March 2022) submitted with the Application for review. No action required.	No	LDN/UFN	Entia	ERM	Lesley/Tonia	RT	Ready for Submission	RT; June 18	Ready for Publishing
1561	AEMP (Appendix 7-A) Page 4.41	Sample sizes	LDN/UFN		Jun 11, 2022	0			No	A minimum of five individual length measurements will be considered the minimum required for the Kolmogorov-Smirnov Test. How can five samples be used to compare a difference between length using this method? I understand this is you minimum but You will have no power to detect a difference using 5 samples, can you revise and justify you sample usage as there is little point testing difference if the data are not able to detect differences.	As with any statistical test, as the sample size decreases, the sensitivity of the Kolmogorov-Smirnov test also decreases, but at no time will the test have "no power". Examination of the critical values table for the test indicates that a sample size of n=5 is included and does still provide a reasonable test statistic. Use of n=5 is arbitrary, however, the use of a minimum sample size of n=5 recognizes the difficulties in catching fish in some of the study area, while still producing meaningful statistical test results. Within Canada, the objective for non-lethal monitoring of fish populations is to collect 100 fish per site (Gray, M.A., A.R. Curry, K.R. Munkittrick. 2002. Non-lethal sampling methods for assessing environmental impacts using a small-bodied sentinel species. Water. Qual. Res. J. Can. 37(1): 195-211). However, this is generally not feasible in small headwater streams in BC. Therefore, a minimum sample size of 5 was proposed, with the objective of catching up to 100 fish, where feasible.	No	LDN/UFN	Entia	ERM/Palmer		RT	Ready for Submission	TD, Jun 27	Ready for Publishing
1561	AEMP (Appendix 7-A) Page 4.41	Sample sizes	LDN/UFN		Jun 11, 2022	1	New		No	The BW Gold - Fish and Aquatic Resources 2013 Baseline Report indicated that 407 fish were visually observed in Lower Chedakuz Creek in one day. Despite your comments that fish are hard to catch in some areas, a minimum sample of 5 seems too low to provide accurate results. In addition, the Government of Canada Metal Mining Technical Guidance for Environmental Effects Monitoring states that 100 fish should be used for non-lethal sampling. Please re-evaluate the minimum sample.	As stated in the response to the Round 0 comment and in the Aquatic Effects Monitoring Program Plan (Appendix 7-A), the minimum sample size is 5 fish. This does not mean that only 5 fish will be sampled at each location. This means that at least 5 fish will be sampled at each monitoring location, with the objective to sample up to 100 fish. The minimum sample size is more likely to be relevant in parts of the study area where fish abundance is lower and it can be difficult to obtain large numbers of fish to sample (e.g., "small headwater streams"). In lower Chedakuz Creek, (which is not a small headwater stream), where fish are more abundant, it is more likely that 100 fish (or close to it) would be sampled.	No	LDN/UFN	Entia	ERM/Palmer	Lesley/Tonia	RT	Ready for Submission	RT; 6/18/2022	Ready for Publishing
1562	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Sampling and analytical lab methodology Mine Site Water Management and Monitoring: provide details on analytical lab methodology for samples.	Analytical testing procedures will vary by parameter. Analyses will be performed using standard analytical methods, as specified in the most recent edition of the British Columbia Environmental Laboratory Manual and supplements to the manual (Ministry of Environment, 2020) (Environmental Management Act Authorization Technical Guidance 1, Terms of Reference - Application Requirements for an Environmental Management Act Effluent Permit. Ministry of Environment, 2014). Samples will be submitted under chain of custody forms to a CALA-certified analytical laboratory.	No	LDN/UFN	ERM			RT	Ready for Submission		Ready for Publishing

1562	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Provide this explanation/reference to manual in text.	The reviewer's comment is acknowledged, no change has been made to Section 7.1. References to the latest version of the BC Environmental Laboratory Manual (BC ENV 2020) have been inserted into the text of Appendix 9-E.	No	LDN/UFN	N/A		N/A	0	Ready for Submission	N/A	Ready for Publishing
1562	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Partially resolved. Specific section of Appendix 9-E should be referenced for sampling and analytical lab methodology		No	LDN/UFN	N/A		N/A	0	Ready for Submission	N/A	Ready for Publishing
1562	Chapter 7 Section 7.1		LDN/UFN		Jun 11, 2022	1	New		No	No response to comment provided.	Reference to the BC Environmental Laboratory Manual (ENV 2020) were provided in Section 4.4, Section 7.3.1.4 and 8.3.2 of Appendix 9-E (Mine Site Water and Discharge Monitoring and Management Plan; March 2022).	RT/TD to review	LDN/UFN	ERM		Tonia/Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
1563	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Sample site locations Appendix 9H WMMP: Provide details/maps of sample site locations.	The Wildlife Mitigation and Monitoring Plan provides general descriptions of monitoring of predicted effects and mitigation effectiveness (Section 4 of Appendix 9-H). As stated in the WMMP (e.g., Section 4.1.1) maps will be incorporated into the WMMP following the completion of the 2021 baseline reporting and/or dependent on mitigation measures.	No	LDN/UFN	N/A		N/A	0	N/A	N/A	N/A
1563	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Unable to resolve until maps from the 2021 baseline reporting have been included.	The reviewer's comment is acknowledged, maps will be incorporated following the completion of 2021 baseline reporting.	No	LDN/UFN	N/A		N/A	0	N/A	N/A	N/A
1563	Chapter 7 Section 7.1		LDN/UFN		Jun 11, 2022	1	New		No	Is 2021 baseline reporting completed now? Please provide reference (both in response and in text) to where these maps can be found.	Thank you for noting this. While BW Gold acknowledges that we have previously indicated that it would add this information, the Application is not being edited further at this time. This comment will be noted, and this edit will be incorporated into a future version of the Application.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1563	Chapter 7 Section 7.2	Environmental Monitoring Program Design	LDN/UFN (Emma Cooke)		Jul 22, 2022	2	Follow up	Information Requirement	No	Please provide these maps/information and explain how it will be incorporated into future revisions.	The Wildlife Mitigation and Monitoring Plan (WMMP; revised and submitted July 16, 2022 to regulator and Indigenous nation [including UFN and LDN] in response to comments) now provides the results of the 2021 pre-construction sampling. Descriptions of the 2021 monitoring programs and sampling locations are provided in the following sections of the July 2022 WMMP: 4.1.1 (Figure 4.1-2; amphibians), 4.2-1 (Figure 4.2-2; bats), 4.4.1 (Figure 4.4-4 and Figure 4.4-5; moose), 4.5.1 (Appendix D provides maps of survey locations; furbearers and grizzly bears), and 4.7.1 (birds) . Chapter 7 provides a summary of environmental monitoring programs with reference to details in each of the monitoring plans (e.g., Appendix 7-A, Aquatic Effects Monitoring Program Plan), and management and monitoring plans (e.g., Appendix 9-H, Wildlife Mitigation and Monitoring Plan). Any future revisions will be applied to the plans (and not the chapter summary).		LDN/UFN	ERM		Tonia		Ready for Submission	RT: Aug 11	Ready for Publishing
1564	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Rationale for proposed sampling program Appendix 9H WMMP: Provide more detail on rationale for sampling program (e.g. Methods, timing, duration).	The Wildlife Mitigation and Monitoring Plan (Appendix 9-H) clearly states the purpose for each sampling program (e.g. monitoring predicted effects) the methods for timing and duration of monitoring is dependent on the predicted effect, the baseline observations, and in some cases as directed by Aboriginal groups.	No	LDN/UFN	N/A		N/A	0	N/A	N/A	N/A
1564	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	The methods for timing and duration of monitoring can still be discussed even though they may be variable and dependent on a few different factors. Monitoring is species-specific so should have some level of certainty as to what range the methods for timing and duration would fall in given the various factors.	Comment will be addressed during application review based on direction from MMO	No	LDN/UFN	N/A		N/A	0	N/A	N/A	N/A
1564	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	1	New		No	Follow-up: "comment will be addressed during application review"	BW Gold has followed up with MMO and we understand that MMO is discussing this with LDN/UFN.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1564	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN (Emma Cooke)		Jul 22, 2022	2	Follow up	Comment	No	Discussion have not been had with EMLI on this, request comment from EMLI.	Please refer to the latest version of the WMMP submitted July 16th. We have included a lot of additional detail on rationale for sampling program (e.g. Methods, timing, duration) for all species specified in the plan.		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD, Aug 11	Ready for Publishing
1565	Chapter 7 Section 7.2	Mine Site Water Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Rationale for distribution of monitoring locations (including depths, where relevant), and how they relate to the maintenance and improvement of the site-wide water balance model, surface water quality model, and groundwater model. Include detail/rationale for sample depths. Also include how the monitoring locations relate to the maintenance and improvement of the three models mentioned.	Table 7.3-5 of Appendix 9-E provides the coordinates for the existing mine site groundwater monitoring wells, including the screened intervals (i.e., sample depths). Proposed wells and sample depths will be field-fit prior to installation. Appendix 9-E, Section 7.3 describes the intent of the mine site monitoring program ("ongoing monitoring will be used to evaluate predictions, calibrate and update models, and update mitigation options as needed throughout the LoM."). Surface water quality results (i.e., mine site water grab samples) will be compared to water quality predictions to ensure that the predicted concentrations are reasonable. Water quality results may be used to update the surface water quality model if needed.	No	LDN/UFN	N/A		N/A	0	N/A	N/A	N/A
1565	Chapter 7 Section 7.2	Mine Site Water Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Sample depths are provided but the rationale for the depths chosen is not included in the plan or the comment response.	Please see attached "R2_LDN-UFN Comment 121,124, 125, 127, 128, 129,187, 227.pdf"	No	LDN/UFN	N/A			0			
1565	Chapter 7 Section 7.2	Mine Site Water Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Unresolved. The response in the referenced pdf document states "depths are selected to characterize the three-dimensional groundwater flow regime across teh Project area, with a focus on zones that may be potential permeable pathways for seepage". This rationale is not included in appendix 9-E. Rationale for sample depths must be included and referenced appropriately.		No	LDN/UFN	N/A			0			
1565	Chapter 7 Section 7.2		LDN/UFN		Jun 11, 2022	1	New		No	No response to comment was provided.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	KP		Cindy/Jordan	AT/KP	Ready for Submission	CB; 20-Jun	Ready for Publishing
1566	Chapter 7 Section 7.2	Mine Site Water Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Analytical testing procedures to be used. Provide detail on specific procedures.	Analytical testing procedures will vary with parameters. Samples will be submitted under chain of custody forms to a Canadian Association for Laboratory Accreditation (CALA)-certified analytical laboratory. Analysis will be in accordance with the latest edition of the "British Columbia Environmental Laboratory Manual For the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples", prepared by the Ministry of Environment (2005).	No	LDN/UFN	N/A			0	Ready for Submission		Ready for Publishing
1566	Chapter 7 Section 7.2	Mine Site Water Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Could provide reference to the latest edition of the "British Columbia Environmental Laboratory Manual For the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples" prepared by the Ministry of Environment (2005) within this Appendix.	The reviewer's comment is acknowledged, no change has been made to Section 7.2. References to the latest version of the BC Environmental Laboratory Manual (BC ENV 2020) have been inserted into the text of Appendix 9-E.	No	LDN/UFN	N/A			0	Ready for Submission		Ready for Publishing
1566	Chapter 7 Section 7.2	Mine Site Water Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Resolved, however specific section should be referenced to address comment.		No	LDN/UFN	ERM			RT	Ready for Submission		Ready for Publishing
1566	Chapter 7 Section 7.2		LDN/UFN		Jun 11, 2022	1	New		No	No response to comment was provided.	Repeat of comment #1562; Please see response to comment #1562.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing

1567	Chapter 7 Section 7.3	Discharge Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Discharge site locations Provide coordinates for discharge sample locations.	Please see attachment - LDN_UFN Comment 216_232_258_ApproxMineWaterDischargeCoordinates.pdf.	No	LDN/UFN	ERM		N/A	RT	N/A		N/A
1567	Chapter 7 Section 7.3	Discharge Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Unable to resolve comment - need access to LDN_UFN Comment 216_232_258_ApproxMineWaterDischargeCoordinates.pdf.	BW Gold has confirmed that access to the file is available. Approximated coordinates for discharge locations have been included in Section 8 of Appendix 9-E.	No	LDN/UFN	ERM		N/A	RT	N/A		N/A
1567	Chapter 7 Section 7.3	Discharge Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Appendix 9-E states that "all anticipated discharges for the Project areas are summarized in Table 8.1-1". LDN_UFN Comment 216_232_258_ApproxMineWaterDischargeCoordinates.pdf has a list of 30 discharge points, yet Table 8.1-1 only lists eight. Given this information the statement that all discharge points are listed seems misleading.	-	No	LDN/UFN	ERM		N/A	RT	N/A		N/A
1567	Chapter 7 Section 7.3	Discharge Monitoring Program	LDN/UFN		Sep 01, 2022	3	New		No	No response was provided to the last comment..	Table 8.1-1 in Section 8.1 of Appendix 9-E provides a list of all anticipated discharges to the receiving environment. The longer list of mine water coordinates are included in the attachment "R3_LDN_UFN Comment ID 1567.pdf (Renamed; approx mine site discharge coordinates - previously provided in the screening round), that present the mine water sampling locations that are listed in Table 9-1 in Appendix 9-E). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia		Ready for Submission	RTI sept 15	Ready for Publishing
1567	Chapter 7 Section 7.3	Discharge Monitoring Program	LDN/UFN (Christina Delaney)		Oct 06, 2022	4	Follow Up		No	Thank you for that clarification please commit to including that information and reference to other document sections and tables in this section (Ch. 7 Section 7.3).	Chapter 7 of the Application will not be revised because it is not a stand alone management plan (and provides a summary of Environmental Management Plans). However Appendix 9-E, the Mine Site Water and Discharge Monitoring and Management Plan (MSDP) will be revised to address all comments as a result of permitting reviews. The revised MSDP will include a table with all anticipated discharges to the receiving environment (Table 8.1-1) and the longer list of all mine water discharge monitoring coordinates (Table 9-1). It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission		Ready for Publishing
1568	Chapter 7 Section 7.3		LDN/UFN		Jun 11, 2022	1	New		No	No response to comment was provided.	The reviewer's comment is acknowledged. It is noted the table included in file "LDN_UFN Comment 216_232_258_ApproxMineWaterDischargeCoordinates.pdf" includes two subheadings, 1) Mine water, and 2) Discharge, the latter of which lists anticipated discharge locations.	No	LDN/UFN	Lorax	KP	Meghan	GM	Ready for Submission	GM; June 14	Ready for Publishing
1569	Chapter 7 Section 7.4	Environment Monitoring Program	LDN/UFN		Jun 11, 2022	0			Yes	Make a commitment to add monitoring stations, if needed, during the life of the project as the understanding of site conditions evolves. Not mentioned in Air Quality and Fugitive Dust Management Plan	Monitoring requirements, including monitoring locations, parameters and frequency will be identified in the Project's air emissions permit. The plan will be updated to incorporate monitoring requirements in the permit.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission		Ready for Publishing
1569	Chapter 7 Section 7.4	Environment Monitoring Program	LDN/UFN		Jun 11, 2022	0			Yes	Regardless of the Project's air emissions permit, "Make a commitment to add monitoring stations, if needed, during the life of the project as the understanding of site conditions evolves." is still a requirement.	The Air Emissions Permit has not yet been received. The plan will be updated to incorporate monitoring requirements in the permit.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission		Ready for Publishing
1569	Chapter 7 Section 7.4	Environment Monitoring Program	LDN/UFN		Jun 11, 2022	0			Yes	Regardless of the Project's air emissions permit, "Make a commitment to add monitoring stations, if needed, during the life of the project as the understanding of site conditions evolves." is still a requirement.	Please see the follow-up response for Comment ID 1569.	RT/TD to review	LDN/UFN	ERM			RT	Ready for Submission	RT: June 28	Ready for Publishing
1569	Chapter 7 Section 7.4		LDN/UFN		Jun 11, 2022	1	New		No	No response to comment was provided.	BW Gold acknowledges the comment, and in previous response to Round 0 Comments indicated that there will be additional monitoring requirements incorporated upon receipt of the permit, as per Section 7.4 of the Joint Application Information Requirements for Mines Act and Environmental Management Act Permits: "EMA permits with air emissions may require additional monitoring." BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. BW Gold will make this revision in the next iteration of the Air Quality and Fugitive Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1570	Chapter 7 Section 7.4	Environment Monitoring Program	LDN/UFN		Jun 11, 2022	0			Yes	Summarize the assessment of the potential environmental effects, risks, and mitigation/management plans to be followed during emergencies and unexpected shutdown events for the pollution control systems.	The Appendix 9-0 will be updated to incorporate discussion on anticipated permit conditions in respect of: - General Direction and Emergency Procedures - Bypasses - Process Modifications	No	LDN/UFN	ERM		N/A	RT	Ready for Submission		Ready for Publishing
1570	Chapter 7 Section 7.4	Environment Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Resolved pending addition of discussion mentioned in response (General direction and emergency procedures, bypasses, etc..)	QP signoff has been included in the revised Appendix 9-O. Additional edits will be completed following Application Review.	No	LDN/UFN	ERM		N/A	RT	Ready for Submission		Ready for Publishing
1570	Chapter 7 Section 7.4	Environment Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	The above mentioned additions were not found.		No	LDN/UFN	ERM		N/A	RT	Ready for Submission		Ready for Publishing
1570	Chapter 7 Section 7.4		LDN/UFN		Jun 11, 2022	1	New		No	Follow up to confirm these additional edits are completed.	BW Gold will make this revision in a subsequent iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1571	Chapter 7 Section 7.5	Post-Closure Environmental Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Ensure the Post-closure Monitoring Program has the same fundamental components as the operational Environment Monitoring Program (i.e., clearly stated objectives, methods, etc..). Missing these components.	As stated in Section 7.5 of Chapter 7 (Environmental Monitoring), generally all post-closure monitoring will be a continuation of the proposed construction and operations monitoring. Section 4.10 in Chapter 4 (Reclamation and Closure Plan) provides proposed changes to any of the post-closure monitoring programs and rationale for changes if monitoring objectives have changed (e.g., the discharge location will be the plunge pool and not the freshwater reservoir in Post-Closure).	No	LDN/UFN	N/A		N/A	0	Ready for Submission		Ready for Publishing

1571	Chapter 7 Section 7.5	Post-Closure Environmental Monitoring Program	LDN/UFN		Jun 11, 2022	0			No	Rationale for changes if monitoring objectives have changed is not detailed enough. For any changes to monitoring program, updated fundamental components (i.e., clearly stated objectives, methods, etc..) will need to be provided.	The reviewer's comment is acknowledged, no changes have been made to Section 7.5.	No	LDN/UFN	N/A		N/A	0	Ready for Submission		Ready for Publishing
1571	Chapter 7 Section 7.5		LDN/UFN		Jun 11, 2022	1	New		No	Unresolved.	BW Gold will be developing detailed Closure and Post-Closure monitoring program plans as Operations proceed (with operational data to refine the understanding of Closure and Post-Closure conditions). As stated in Section 7.5 of the Application, post-closure monitoring will be a continuation of and/or a modification of the monitoring programs identified in Section 7.1 and Section 7.4. Modifications to the monitoring plans have been identified in Section 4.10, where monitoring locations would change (e.g., discharge location will be the plunge pool and not the freshwater reservoir in Post-Closure). Future changes to the Closure and Post-Closure monitoring programs will be updated or referenced in the Reclamation and Closure Plan. BW Gold anticipates that Operational monitoring, adaptive management and evaluation of operational environmental monitoring programs will all be required to detail any changes to the monitoring programs outlined in Chapter 7. For example, the Aquatic Effects Monitoring Program (AEMP) will be re-evaluated and recommendations made for adjustment, if necessary, during each reporting cycle to ensure that the program continues to achieve its objectives through all phases of the mine plan. This re-evaluation and adjustment of the AEMP will continue throughout the Closure phase and into Post-Closure phase to provide a program scope that reflects the environmental conditions existing at the time and expected to occur in the five-year period following each reporting period.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1572	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Proposed QA/QC programs Appendix 9H WMMP: Provide more detail on proposed QA/QC measures/programs.	Standard methodologies will be implemented for all wildlife monitoring programs that typically include field and/or laboratory QA/QC procedures. The detailed procedures are described in the key guidance documents listed in Section 1.3.3 of Appendix 9-H (e.g., British Columbia Resources Inventory Standards Committee (RISC) has established standards for collecting, interpreting, and reporting natural inventory data.). Additional standard QA/QC procedures for wildlife data include using digital data entry and manual review of data for errors prior to reporting to ensure data consistency and completeness will also be implemented. These detailed QA/QC procedures will be included in the Wildlife Monitoring and Mitigation Plan (WMMP) update. The next draft of the WMMP is targeted for submission by the end of Q1 2022. will be prepared at the end of the review of the Joint Mines Act/Environmental Management Act Permits Application to reflect changes to the plan or commitments made during the review.	No	LDN/UFN	N/A		N/A	0	N/A		
1572	Chapter 7 Section 7.1	Environmental Monitoring Program Design	LDN/UFN		Jun 11, 2022	0			No	Confirm detailed QA/QC procedures are added to updated WMMP.	QA/QC procedures will be included in the updated WMMP at the end of the review of the Joint Mines Act/Environmental Management Act Permits Application.	No	LDN/UFN	N/A		N/A	0	N/A		
1572	Chapter 7 Section 7.1		LDN/UFN		Jun 11, 2022	1	New		No	These QA/QC measures noted in the last response are not included in the most recent WMMP.	BW Gold will make this revision in the next iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
1573	Chapter 7 Section 7.4.2	Air Quality and Fugitive Dust Monitoring	LDN/UFN		Jun 11, 2022	1	New		No	Point source discharge monitoring will be conducted once every five years at the following locations How was 5 years decided on? Seems like it should be done more frequently.	The sampling and analysis will be conducted after the first year of operation and every five years after that, unless sampling indicates higher frequency is needed. With new equipment onsite, it is expected that this level of frequency will be sufficient for determining if emissions exceed permitted rates.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 26	Ready for Publishing
1574	AEMP (Appendix 7-A) General	Data Governance	LDN/UFN (Al Irvine)		Jul 22, 2022	2	Follow Up	Comment	Yes	The current plan for data governance provided by the EAC Condition is insufficient to provide peace of mind that the data will be collected correctly, enough data will be gathered to inform proper monitoring and miitgation and to provide assurance that mitigation actions will be persued by the proponent in a timely manner. What is stated in Section 7.2.4 is not what is being requested and we would like to see data governance more appropriately addressed through this stage of the permitting vs. later as part of the Environmental Monitoring Board (i.e.. with potential to never really happen because there are weaker or absent regulatory measures to enforce what happens there).	The Aquatic Effects Monitoring Program (AEMP) Plan received approval from the Environmental Assessment Office in February 2022. The timelines for reporting and contents of reports as described in Section 7 of the AEMP Plan are regulatory compliance requirements. BW Gold is committed to implementing the AEMP Plan as described (and revised through the Application Review) including data collection, analysis, reporting requirements/timelines, and that other regulatory requirements (e.g,. Environmental Assessment Certificate conditions or federal Decision Statement conditions) are met throughout all phases of the Project. BW Gold also anticipates that there will be aquatic effects monitoring requirements in an EMA permit (as is typical for all mining projects in BC), which will also be integrated into the AEMP Plan once the EMA permit is issued. BW Gold notes that work is underway to convert some monitoring to automated systems (e.g., temperature and hydrometric monitoring), which will be reflected in subsequent updates to the AEMP Plan. BW Gold also		LDN/UFN	ERM	Entia	Lesley		Ready for Submission	RT; Aug 7	Ready for Publishing
1574	AEMP (Appendix 7-A) General	Data Governance	LDN/UFN (Al Irvine)		Aug 30, 2022	3	Follow Up		No	The current plan for data governance provided by the EAC Condition is insufficient to provide peace of mind that the data will be collected correctly, enough data will be gathered to inform proper monitoring and miitgation and to provide assurance that mitigation actions will be persued by the proponent in a timely manner. What is stated in Section 7.2.4 is not what is being requested as it is too high level, will arive too slow and does not provide the information that the Nations require to interpret the data themselves if they percieve a need to do so. The "triggers" that may be included in a trigger response plan should be tracked in real time when possible and with the use of open source tools to databases accessible by the Nations. As mentioned, we would like to see data governance more appropriately addressed through formal commitments at this stage of the permitting.	BW Gold appreciates the reviewer comment, however stands by its previous response. We remain open to refining process and timing for sharing data through the forums established in our agreement		LDN/UFN	ERM	Entia	Lesley		Ready for Submission	RT; sept 9	Ready for Publishing
1574	AEMP (Appendix 7-A) General	Data Governance	LDN/UFN (Al Irvine)		Oct 06, 2022	4	Follow Up		No	The reviewer appreciates BW Golds responses, however stands by the previous three comments.	BW Gold acknowledges the comment and looks forward to working with LDN/UFN through the forums established in our agreement moving forward.		LDN/UFN	ERM	Entia	Lesley		Ready for Submission	TD, Oct 17	Ready for Publishing
1574	AEMP (Appendix 7-A) General	Data Governance	LDN/UFN (Al Irvine)		Nov 17, 2022	5	Follow Up		No	Waiting on BW Gold to schedule a meeting to discuss data sharing, as a next step from the November 9th meeting.	A data sharing meeting has been scheduled by Jack Love for Friday, December 9,2022 at 11am.		LDN/UFN	BWG		Travis			TD, Dec 7	Ready for Publishing

1574	AEMP (Appendix 7-A) General	Data Governance	LDN/UFN		Jun 11, 2022	1	New		No	A formal plan for data governance should be a part of the Aquatic Effects Monitoring Program Plan. Within this "Data Governance Plan": In all situations where it is possible, the raw unprocessed data itself for all components of the annual AEMP should be published to the nations as soon as is possible (preferably in real time through online APIs for any data that can be collected with sensors and documented real time such as water temperature/turbidity/pH, hydrometric stage, groundwater level, atmospheric conditions) - even before data interpretation is done so that data integrity can be assessed and interpretation of key information can be completed by the Nations themselves if they see fit. The time lag between data collection, interpretation, publishing and potential management interventions is too long and is not necessary in this day and age for many study components. Laboratories used for analysis of parameters such as water quality, invertebrate taxonomy, fish tissue sampling, should include Nation representatives in distribution lists and within data access portals when data results are available. Digital field data collection methods should be developed for all components of the AEMP as is possible with upload of manually collected data occurring through application programming interfaces to databases immediately after collection (or real-time during collection). The data forms and receiving database architectures should be designed in consultation with and shared openly with the Nations.	As required by the Environmental Assessment Certificate (EAC) Condition 30 (Aquatic Effects Monitoring Plan) (j) and described in Section 7.2.1 of the Aquatic Effects Monitoring Program (AEMP) Plan, a technical report will be generated on an annual basis, which will include all data collected within a given calendar year to Indigenous nations, the Environmental Monitoring Committee (EMC) and regulators. As stated in Section 7.2.4 of the AEMP, an executive summary-style report written in manner understandable to a lay audience will be provided. The intent of this short report will be to provide a high-level overview of the AEMP data, results and conclusions in an easier to understand, plain language format, as required by EAC Condition Section 30(j). BW Gold is open to discussing additional protocols for data sharing with LDN and UFN as part of the Environmental Monitoring Board that the parties have jointly established.	No	LDN/UFN	ERM	Entia	Lesley	RT	Ready for Submission	RT; June 23	Ready for Publishing
1575	Chapter 9 Section 7.2.10.2	Water Quality	LDN/UFN		Jun 11, 2022	0			No	"During post-closure, overflow water from the TSF supernatant ponds is suitable for direct discharge into Davidson Creek" - Section 5.4.9.8 indicate that exceedances of several parameters of concern are expected from the TSF in post-closure, which indicates that it is probably *not* suitable for discharge into Davidson Creek without further treatment	MG (Lorax): The reviewer's comment is noted. This wording has been revised to the following: "During post-closure, overflow water from the TSF supernatant ponds is planned for discharge into Davidson Creek." Project discharges in the Post-Closure phase were not evaluated within the context of potential risks to aquatic receptors associated with water quality. Appropriate concentration limits for all Project discharges in the Post-Closure phase will be developed in a subsequent regulatory application. Several opportunities exist to refine and improve the water quality predictions in Post-Closure, such as reclamation research studies into pit lake amendments and wetland water treatment.	No	LDN/UFN	N/A		N/A	0	N/A	RT; Aug. 7	Ready for Publishing
1575	Chapter 9 Section 7.2.10.2 and Section 5.4.9.8	Water Quality	LDN/UFN		Jun 11, 2022	1	New		No	No clear plan for ensuring that post-closure discharges will not harm aquatic life, or meet regulatory criteria.	This comment is acknowledged. It is noted the temporal scope of the Joint Mines Act / EMA permits application was agreed during IRT development to include the Construction and Operations phases. That said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 14	Ready for Publishing
1576	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN		Jun 11, 2022	0			No	This table proposes discharge targets for POPCs that are substantially higher than the BC WQG-AL (an order of magnitude higher in the case of D-Cd in Table 8.2-4). While these are conservative estimates from the modeling in ch.5, it is unclear whether the conservatism in modeling will negate the exceedance of these guidelines. In any case, setting a target that is higher than the established guidelines is highly concerning from an environmental health perspective, and the rationale for the appropriateness of the chosen numbers is not explicitly laid out.	It is noted that an exceedance of a WQG does not imply that an adverse effect will occur or that an unacceptable risk of an effect exists (BC ENV 2021). Rather, an exceedance may indicate that the potential for adverse effects may be increased and additional investigation may be required (BC ENV 2021). The proposed discharge targets represent a conservative first-estimate of upper limit discharge quality, in the absence of final pond designs. The predicted values may be revised as additional information on the design of the SCP is obtained. BC ENV. 2021. British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture Guideline Summary. BC Ministry of Environment and Climate Change Strategy: Victoria, BC. Available online: https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-guidelines/approved-wqgs/wqg_summary_aquaticlife_wildlife_agri.pdf	No	LDN/UFN	N/A		N/A	0	N/A		
1576	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN		Jun 11, 2022	1	New		No	See Comment ID 5	ID 5 has been addressed.	RT/TD to review	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM, 17-Jun	Ready for Publishing
1577	Chapter 9 Sections 8.2.3 and 8.2.4	Water Quality	LDN/UFN		Jun 11, 2022	0			No	"Discharge limits for the Membrane WTP for the Post-Closure period will be proposed in subsequent regulatory applications." - This approach is problematic for a number of reasons. What if site conditions or technical limitations of the WTP do not allow for the meeting of BC WQGs in post-closure? Deferral of creation of these discharge limits to later applications creates a substantial risk that these limits will be unsatisfactory and with limited possibility for recourse due to the project already being in an operational state.	Additional information about post-closure water management will be described in the Closure and Post-Closure Water Quality Management Plan, which is required by EAC Condition 34. This plan will describe the proposed treatment technologies and mitigations for post-closure. As the project advances it will refine mitigation measures and contingencies based on water monitoring data and model updates during Operations as well as the results of reclamation research trials described in the Reclamation and Closure Plan (i.e., pit lake amendments and wetland treatment). The membrane WTP in post-closure is designed to meet BC WQG. The Environmental Management Act permit application is for the Construction and Closure phases. BW Gold will evaluate potential impacts to the aquatic environment as a result of post-closure predictions in subsequent applications.	No	LDN/UFN	N/A		N/A	0	N/A	GM; Sept 27	Ready for Publishing
1577	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN		Jun 11, 2022	1	New		No	Discharge limits for the Membrane WTP for the Post-Closure period will be proposed in subsequent regulatory applications. and planning that indicates discharge targets for POPCs to be greater than the current BC WQG-AL is not supported by the nations. A best practice would be to plan for discharge to meet the current guidelines or to be lower than the current guidelines (as the allowable concentrations may actually decrease in the future as updates occur). The above 2 comments are unresolved. Deferral to a later stage of planning creates a substantial risk that the discharge concentrations will be unsatisfactory and with limited possibility for recourse due to the project already being in an operational state. In regard to deferring to the "Closure and Post-Closure Water Quality Management	This comment is acknowledged. It is noted the temporal scope of the Joint Mines Act / EMA permits application was agreed during IRT development to include the Construction and Operations phases. That said, BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 14	Ready for Publishing
1577	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN		Jul 27, 2022	2	Follow Up		No	The above 2 comments are still unresolved. As per previous comment, planning that indicates discharge targets for POPCs to be greater than the current BC WQG-AL and deferral to a later stage of planning is not supported by the nations. Please re-assess this planning to address this concern and at a minimum meet the current standards and guidelines.	Thank you for this response. We observe that Comment 1577 cites Chapter 9 Tables 8.2-3 and 8.2-4 in Column B of this tracking table. Because the Application Chapter 9 does not contain tables with those titles, our response below assumes the comment is intended to refer to Sections 8.2.3 (Membrane NF Water Treatment Plant) and 8.2.4 (TSF Spillway) of Appendix 9-E (Mine Site Water and Discharge Monitoring and Management Plan). For reference, the reader is referred to updated water balance/water quality predictions presented as part of Round 1 responses:	No	LDN/UFN	Lorax		Meghan	GM		GM; Aug 16	Ready for Publishing

1577	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN		Aug 30, 2022	3	Follow Up		No	The updated water quality model results are still above BC WQG. Please provide adaptive management options which take into account achieving discharge targets below BC WQG and please include these in the updated Water Management Plan	Thank you for the response. As noted above, BC ENV guidance allows for discharge limits above BC WQGs under certain conditions. Final discharge limits for Project phases beyond the Operations phase will be established as part of subsequent permitting applications. Development of these limits is anticipated to consider both BW Gold's obligation to ensure the Project does not cause exceedances of BC WQGs or approved SBEBs in Davidson Creek or Creek 661 per EA Certificate #M19-01, as well as provincial and federal regulatory requirements including, but not limited to, the requirement for discharged effluent to be not acutely toxic. Adaptive management options exist to help Project water management meet the above requirements, including: •Optimize selection of water sources conveyed to the membrane WTP based on contact water signature (i.e., treat TSF D as a priority rather than TSF C). •Increase water treatment rate to treat additional load from TSF D (or other contact sources as required). •Keep the FWR operational, as required, until discharge and water quality requirements in the downstream receiving environment are met. •Optimize management of non-contact waters through construction and operations phases to reduce overall treatment requirements These options will be identified in the next update of the Mine Site Water and Discharge Monitoring and Management Plan once the EMA effluent permit has been finalized.		LDN/UFN	Lorax		Meghan		Ready for Submission	GM; Sept 23	Ready for Publishing
1577	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN (Christina Delaney)		Oct 06, 2022	4	Follow Up		No	How does this meet condition 26? The nations request that all phases are planned in such a way that BC WQG will be met, including in the post-closure phase.	Condition 26 states, "During Construction, Operations, Closure and Post-Closure, the Holder must ensure the Project does not cause downstream water quality to exceed BC Water Quality Guidelines…". In other words, Condition 26 applies to water quality downstream of the Project, and is not specified to apply at Project end-of-pipe effluent discharges. As noted in earlier responses to this comment series, the latest water balance/water quality model predicts water quality in Davidson Creek downstream of the Project (at the nearest downstream node WQ28) during the Post Closure phase meets BC WQGs or proposed SBEBs under conservative variable climate conditions (95th percentile predicted concentrations).		LDN/UFN	Lorax					GM; Oct 31	Ready for Publishing
1577	Chapter 9 Tables 8.2-3 and 8.2-4	Water Quality	LDN/UFN (Christina Delaney)		Dec 01, 2022	5	Follow Up		Yes	unresolved. Comment from MMO requested, pertaining to Artemis' expectation that an exception to BC WQG will be granted to allow for exceedances in perpetuity. MMO comment is also requested pertaining to where sampling must be conducted and if "at the nearest downstream node WQ28" is appropriate vs. sampling at "end of pipe".	Comment noted and understood to be directed towards MMO. No further action required by BW Gold at this time.		LDN/UFN	Lorax					RT; Dec 2	Ready for Publishing
1578	Chapter 9 Section 11.1	Water Quality	LDN/UFN		Jun 11, 2022	0			No	"Lowering the Pit Lake level in post-closure so that some or all of the Pit Lake seepage and some of the Upper Waste Stockpile seepage flows towards the pit rather than to downstream sites" - Is this practical? It seems that this would require continuous pumping in perpetuity.	The lowering of the Pit Lake level in post-closure is described as a possible contingency action to take during post-closure. As the project advances it will update its Reclamation and Closure Plan and the Closure and Post-Closure Water Quality Management Plan required by EA condition 34. These updates will include refinement of the proposed mitigations and contingencies for post-closure based on observations during Operations and outcomes of reclamation research trials (i.e. wetland treatment and pit lake amendments). At this time, BW Gold considers this a reasonable contingency measure.	No	LDN/UFN	N/A		N/A	0	N/A		
1578	Chapter 9 Section 11.1	Water Quality	LDN/UFN		Jun 11, 2022	1	New		No	"Lowering the Pit Lake level in post-closure so that some or all of the Pit Lake seepage and some of the Upper Waste Stockpile seepage flows towards the pit rather than to downstream sites" Is pumping of water in perpuity planned to accomplish this lower water level? Include a description of how/why/where the process of lowering the water will be accomplished.	Yes, pumping of water into perpetuity is proposed to maintain the pit lake water level. Version 12b water quality model results (as presented in the Application) were computed on October 26, 2021. Since that time, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. The updated water balance and water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in KP (2022), as part of BW Gold Ltd. (2022). The updated water balance for the Closure and Post-Closure phases, including pit lake water level management, is presented in further detail in KP (2022). Please refer to BW Gold Ltd. (2022) for further information. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Knight Piésold Ltd. (KP), 2022. Blackwater Gold Project – Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization. KP Ref. No. VA22-01082 dated June 30, 2022.	No	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1579	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	Risks and potential impacts of mining and waste discharges to water quality and quantity. Not detailed for "each phase of mine life"	Predicted impacts of mining and waste discharges to water quality and quantity for all mine phases are presented in Section 5.3 (Site-Wide Water Balance Model) and Section 5.4 (Water Quality Model). Potential effects and risk associated with impacts of mining and waste discharges to water quality and quantity are presented in Section 6.3 (Aquatic Environment), Section 6.6 (Terrestrial Environment - Wildlife) and Section 6.7 (Human Health) for the Construction and Operation phases. Risks and impacts to water quality and quantity in the Closure and Post-Closure phases will be further detailed in future regulatory submissions in concert with a current mine plan, WB/WQM, and effects assessment.	No	LDN/UFN	KP		N/A	AT/KP	Ready for Submission	GM; june 17	Ready for Publishing
1579	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	LDN/UFN support MMO's requests for more information on this topic and look forward to continuing discussions about water quality/treatment in all phases of mine life.	The reviewer's comment is acknowledged and discussions will continue through the Application review.	No	LDN/UFN	N/A		N/A	0	N/A		

1579	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	1	New		No	When can reviewers expect new information on this topic?	BW Gold has been working to optimize water management during the Closure and Post-Closure phases of the mine with a view to improving water quality predictions during these phases and looks forward to presenting these results to the MRC as part of the Application Review process.	No	LDN/UFN	Lorax	KP	Meghan	GM	Ready for Submission	GM; June 17	Ready for Publishing
1579	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jul 27, 2022	2	Follow up	Information Requirment	Yes	This plan should include information per the original comment #1579 "Risks and potential impacts of mining and waste discharges to water quality and quantity. Not detailed for "each phase of mine life". Please add the information to this, as it is the "...discharge management plan". Request for a memo addressing this comment.	BW Gold will revise the Mine Site Water and Discharge Monitoring Management Plan upon its next issuance to speak to risks and potential impacts of mining and waste discharges to water quality and quantity. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. Since the Round 1 comment response, BW Gold has worked to optimize water management during the Closure and Post-Closure phases. The reader is referred to the below memo presenting updated water balance/water quality predictions that integrate these optimizations: Memo title: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for	No	LDN/UFN	Lorax	KP	Meghan	GM	Ready for Submission	GM; Aug 15	Ready for Publishing
1579	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Aug 30, 2022	3	Follow Up		Yes	Include these details in the updated mine waste and water discharge plan.	The reviewer's comment is acknowledged.		LDN/UFN	Lorax	KP	Meghan		Ready for Submission	GM; Sept 16	Ready for Publishing
1580	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	Assessment of upset conditions (e.g., extreme flow conditions, icing, etc..) and impacts on the performance of relevant infrastructure. Not included.	Winter construction considerations are discussed in Section 3 for the TSF. Upset features such as extreme flow conditions are considered in the design of water management features. For example, design criteria for the TSF is described in Appendix 3-J; the Probable Maximum Flood (PMF) was selected as the Inflow Design Flood (IDF).	No	LDN/UFN	N/A		N/A	0	N/A		
1580	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	This response is noted. However, the sections in question should at least be referenced in this plan, if not discussed outright in the context of mine water discharge management in this report	The reviewer's comment is acknowledged.	No	LDN/UFN	N/A		N/A	0	N/A		
1580	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	Not clear if references have been made.		No	LDN/UFN	N/A		N/A	0	N/A		
1580	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	1	New		No	Response not received re: upset conditions and impacts on the performance of relevant infrastructure. Have all elements of this topic been addressed in other sections and have those sections been referenced in this plan?	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	Lorax	KP	Stephanie/Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1580	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	If assessment of upset conditions is included in design criteria, this needs to be referenced in this report. Additionally "impacts on the performance of relevant infrastructure" need to be addressed or a reference provided to where this is addressed. This is a chapter 9 plan that is said to be revised post-permitting - please ensure comment is carried forward and revisions are included in the updated management plan	BW Gold respectfully disagrees with the suggested revision and will not make the change, as providing an "Assessment of upset conditions (e.g., extreme flow conditions, icing, etc..) and impacts on the performance of relevant infrastructure. " is not relevant to the functioning of the Mine Site Water and Discharge Monitoring and Management Plan. Please see Section 2 of this plan for a description of the purpose and objectives.		LDN/UFN	KP	Lorax	Stephanie	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	TRPs for upset conditions, and contingency plans for mitigating potential impacts related to failure of any component(s) of the plan. Section 10 and Table 10-1 are a good first step in the development of a TRP. However, section 10 mentions the development of a "detailed TRP that will be developed prior to the Operations phase." This detailed TRP does not seem to be included here, and table 10-1 does not seem to include contingency plans for all foreseeable failures of mine water management components.	The detailed TRP will be developed during the Early Works and Construction phases. BW Gold anticipates that submission of the detailed TRP for review and approval prior to Operations will become a condition of the Mines Act permit. Table 10-1 of Appendix 9-E outlines the corrective actions to be implemented in the event of any non-conformity: the "events" listed in the table (e.g., "discharge quality does not meet required characteristics") and the "responses" to be implemented are broad enough to capture reasonable potential failures of the mine site water management facilities.	No	LDN/UFN	N/A		N/A	0	N/A		
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	Confirm changes have been made	BW Gold respectfully notes the detailed TRP will be developed during the Early Works and Construction phases. Changes will be made to Appendix 9-E at that time to ensure consistency with the TRP, in addition to other changes that result from the Application Formal Review process.	No	LDN/UFN	N/A		N/A	0	N/A		

1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Manageme	LDN/UFN		Jun 11, 2022	0			No	This has not been included in application thus far.	-	No	LDN/UFN	N/A		N/A	0	N/A		
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	1	New		No	awaiting more detail on this topic.	This comment is acknowledged. As noted, a detailed TRP will be developed during the Early Works and Construction phases. This timeline is proposed such that the detailed TRP, once developed, can account for considerations raised during the Application Review process.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 16	Ready for Publishing
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	We want a commitment from BW stating that the Nations will continue to be consulted on the development of the TRP. Please provide it for review when available.	BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement.		LDN/UFN	BWG		Cole	TD	Ready for Submission	CB; July 25	Ready for Publishing
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jul 22, 2022	3	Follow up		No	This comment is not resolved. The nations request to be consulted on the development of the TRP, as it continues.	BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN (Christina Delaney)		Oct 06, 2022	4	Follow up		No	This comment is being discussed with LDN and UFN, we will keep this comment open until we finish those dicussions.	BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement.		LDN/UFN	BWG		Travis			TD, Oct 20	Ready for Publishing
1581	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN (Christina Delaney)		Nov 17, 2022	5	Follow up		No	Waiting to hear back from BW Gold on how this will be accomplished through the PA. Meeting with ENV required to discuss the TRP.	BW Gold is committed to consulting with the Nations on the development of the TRP. The timeline for development of the TRP is set out in response to the round 1 comment. BW Gold understands that ENV is working to set up a meeting to discuss matters within their purview, and looks forward to discussingh the TRP at that meeting.		LDN/UFN	BWG					RT; nov 2 1	Ready for Publishing
1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	Analysis of potential impacts if contingencies fail. Not included.	An analysis of the potential impacts if the non-conformities and correctives actions ("contingencies") fail is discussed in Section 10 and Table 10-1 and Section 11 and Table 11-1 of Appendix 9-E.	No	LDN/UFN	N/A		N/A	0	N/A		
1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	0			No	Section 10 and 11 discuss the response to failures, but do not analyze what the potential impacts would be.	-	No	LDN/UFN	N/A		N/A	0	N/A		
1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jun 11, 2022	1	New		No	Awaiting detail on the potential impacts if contingencies fail.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Chapter 9 management plans are said to be revised post-permitting. Please ensure comment is carried forward and revisions are included in the updated management plan. Alternatively, please provide a memo that details the analysis of potential impacts if contingencies fail.	BW Gold respectfully disagrees with the suggested revision and will not make the change. Potential impacts to the aquatic environment in the event that the corrective actions to be implemented result in non-conformaties are described in Table 10-1 and/or the adaptive management responses outlined in Table 11-1 of Appendix 9-E, which would be similar to those described in Chapter 6.3. Potential effects that were assessed were water quality changes in the receiving environment and reduction in fish habitat associated with reduced flows. The management actions will be assessed and reviewed by on-site staff, and additional measures will be implemented as needed based on monitoring in the receiving environment. Chapter 6 of the MA/EMA permit application discusses the results of this EA. Further information can be found in the Project EA - response to similar comment 955.		LDN/UFN	KP	Lorax	Stephanie	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN		Aug 26, 2022	3	Follow up	information request	Yes	Comment not addressed. We are still awaiting detail on the potential impacts if contingencies fail. Chapter 9 management plans are said to be revised post-permitting. Please ensure comment is carried forward and revisions are included in the updated management plan. Alternatively, please provide a memo that details the analysis of potential impacts if contingencies fail.	BW Gold recognizes that management plans may need various updates as a result of permitting reviews. Appendix 9-E will be updated to indicate that potential impacts, if the contingency measures fail, include water quality changes in the receiving environment and reduction in fish habitat associated with reduced flows. The updated plan will reference Chapter 6.3 of the Application. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	KP	Lorax	Stephanie	AT/KP	Ready for Submission	KP, Sep 13	Ready for Publishing

1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN (Christina Delaney)		Oct 06, 2022	4	Follow up		Yes	The nations are not satisfied that adequate analysis has been done or that the effects to the recieving environment would be acceptable with the amount of detail that has been presented at this point. A greater level of detail for the analysis of the potential impacts is sought, including more details of BC WQG in relation to the contaminants that would be released causing the "water quality changes in the receiving environment" and quantified "reduction in fish habitat associated with reduced flows". We expect proactive studies, designs and measures to be in place in order to ensure compliance to Condition 26, which prohibits the project to cause exceedances of water quality guidelines. What is the highest risk contaminant if contingencies were to fail and what will you do to ensure that even in that worst case scenario, that evironmental impacts would fall within acceptable thresholds?	As noted in earlier responses to this comment series, several plans, mitigations, and contingencies are in place to ensure the Project meets its environmental obligations, including EA Certificate Condition 26. Indeed, the Project design since the EA Application has been refined with full consideration of BW Gold's obligation to meet Condition 26 and, amongst other design features, has resulted in the commitment to construct and operate two active WTPs during the Operation phase. The WTPs represent an important backstop to prevent Project contact waters from directly discharging to the receiving environment and prevent non-compliance with Condition 26. As such, several contingencies and mitigations have been or are committed to being developed to ensure the ongoing effective operation of the WTPs and/or water management in the event of a temporary pause in treatment. Specifically, BW Gold and its vendors have developed contingency plans for water treatment during the Construction and Operation phases (e.g., Application Appendix 9-E; Application Review Round 2 Comment Response #488), and have committed to the development of a Trigger Response Plan. It is anticipated that these plans will be refined as the Project progresses and carried to the Post-Closure phase. Specific to the Post-Closure phase, notable contingencies exist should treatment operations pause including temporary management of contact waters to the pit, which offers several years of storage (KP 2022). If mitigations and contingencies fail and the WTPs discharge untreated contact water to the receiving environment, there is potential for significant adverse effects to aquatic receptors from the discharged effluent, depending on the parameter concentrations in untreated effluent, the flow volume, and the duration of discharge, amongst other variables. Water quality predictions have been evaluated from water quality model scenarios in which no treatment benefit is assumed: •Operation phase: Lorax (2022a) •Post-Closure phase: Lorax (2022b) In both scenarios, cadmium represents the parameter from which the greatest aquatic risk is anticipated as a result of the high relative magnitude of guideline exceedance and constant duration of guideline exceedance in Davidson Creek. The results of these analyses highlight the importance of treatment for the Blackwater Project. Specific to the Post-Closure phase, a Work Plan has been submitted by BW Gold (Lorax 2022c) that will support alternate long-term mitigation strategies for pit lake water quality with the additional objective of minimizing BW Gold's reliance on active treatment in the Post-Closure phase. The MDSP will be revised to identify the types of adverse effects that could occur if other mitigation and		LDN/UFN	Lorax	ERM	Meghan	GM		GM; Oct 24	Ready for Publishing
1582	Chapter 9 Management Plans Section 9.6	Mine Site Water Management Plan/9.7 Discharge Management Plan	LDN/UFN (Christina Delaney)		Dec 01, 2022	5	Follow up		Yes	Thank you for responding to the question with that information. The nations are still not satisfied with this approach. The nations do not agree that that the effects to the recieving environment would be acceptable. The nations request that planning is done such that effects to the receiving environment are expected to meet the current BC WQG in relation to the contaminants that would be released causing the "water quality changes in the receiving environment" and quantified "reduction in fish habitat associated with reduced flows". We expect proactive studies, designs and measures to be in place in order to ensure compliance to Condition 26, which prohibits the project to cause exceedances of water quality guidelines. What will you do to ensure that even in that worst case scenario, that evironmental impacts would fall within acceptable thresholds?	This comment is acknowledged. BW Gold notes this comment was discussed at our Nov. 9 Issues Resolution meeting and as an outcome, the Nations requested a meeting with ENV to discuss. BW Gold understands a G2G meeting has been set for Dec. 7.		LDN/UFN	Lorax					TD, Dec 8	Ready for Publishing
1583	Appendix 9-E 6.1, last sentence		LDN/UFN		Jun 11, 2022	1	New		No	the creek flows north and east….. - specify Turtle creek	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 24	Ready for Publishing
1583	Appendix 9-E 6.1, last sentence		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Add detail to plan when updated.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1584	Appendix 9-E 6.4.2		LDN/UFN		Jun 11, 2022	1	New		No	paired shallow and deep monitoring wells - shorten to nested pairs	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 14	Ready for Publishing
1584	Appendix 9-E 6.4.2		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Revise in updated plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1585	Appendix 9-E figure 7.1-1 to 7.1-6		LDN/UFN		Jun 11, 2022	1	New		No	include a legend to define line colours/solid vs dashed etc…	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 16	Ready for Publishing
1585	Appendix 9-E figure 7.1-1 to 7.1-6		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Revise in updated plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1586	Appendix 9-E 7.2.4		LDN/UFN		Jun 11, 2022	1	New		No	Any material remaining material will be fully reclaimed….	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1587	Appendix 9-E 7.2.5		LDN/UFN		Jun 11, 2022	1	New		No	geomembrane-lined earthfill berms on the North, east and west sides of WMP. What will contain the south side of WMP?	Natural ground. Please refer to the associated design report (Section 4.5 of Appendix 3-J) for additional details related to the WMP.	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 27	Ready for Publishing

1588	Appendix 9-E 7.3.1.1		LDN/UFN		Jun 11, 2022	1	New		No	QA/QC components of the mine surface water monitoring program.... - should this be surface and groundwater monitoring program?	No. Groundwater monitoring QA/QC components are presented in Section 7.3.4.1 of Appendix 9-E.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1589	Appendix 9-E 7.2.1		LDN/UFN		Jun 11, 2022	1	New		No	specify drawdown extent concentrated towards the southeast from open pit	Thank you for this suggesion. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1589	Appendix 9-E 7.2.1		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. include in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1590	Appendix 9-E 7.2.3		LDN/UFN		Jun 11, 2022	1	New		No	higher-grade LGO ore - remove ore.	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 17	Ready for Publishing
1590	Appendix 9-E 7.2.3		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. include in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1591	Appendix 9-E 7.3.1.4		LDN/UFN		Jun 11, 2022	1	New		No	Has ORP been previously defined?	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them. ORP stands for Oxidation-Reduction Potential.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 23	Ready for Publishing
1592	Appendix 9-E 7.3.4.1		LDN/UFN		Jun 11, 2022	1	New		No	add acronyms for Total organic carbon (TOC) and dissolved organic carbon (DOC)	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 17	Ready for Publishing
1592	Appendix 9-E 7.3.4.1		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. include in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1593	Appendix 9-E 7.3.4.4		LDN/UFN		Jun 11, 2022	1	New		No	seep mapping surveys only during dry periods? Perhaps use dry periods to identify locations of non-seasonal seeps but sample during wet periods as well to capture seepage quantity	BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1593	Appendix 9-E 7.3.4.4		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward.why was it decided to only survey seeps in dry periods? Have the limitations to this methodogy been evaluated?	Initial seep mapping will be conducted during dry periods to identify locations downgradient of proposed project facilities where groundwater is discharging to surface under natural (baseline) conditions. Identifying the locations where groundwater discharges to surface during wetter conditions when precipitation and runoff also contribute to water on the ground surface is less ideal. Seep locations will be monitored during project development to assess potential impacts to surface water from groundwater. If water quality indicates that a groundwater seep is potentially impacted with seepage from an upgradient project facility, a suitable monitoring frequency and schedule will be determined to monitor the site and characterize the flows.							Ready for Submission	TD; Aug 16	
1594	Appendix 9-E 8.2.2.1		LDN/UFN		Jun 11, 2022	1	New		No	Define Cr (chromium) earlier on and then use Cr throughout, and other elements as applicable	BW Gold will make this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 17	Ready for Publishing
1594	Appendix 9-E 8.2.2.1		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward.include edit in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1595	Appendix 9-E Section 2		LDN/UFN		Jun 11, 2022	1	New		No	Does life of mine consider the closure phase and what time period does this cover?	Yes, the term "Life of Mine" includes the Closure phase. The Closure phase is Year +24 to approximately Year +45, ending when the Open Pit has filled and the TSF is allowed to passively discharge to Davidson Creek.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1595	Appendix 9-E Section 2		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward.Thank you for the answer to this question. Please include this in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1596	Appendix 9-E Figure 6.2-2		LDN/UFN		Jun 11, 2022	1	New		No	How is the long-term mean monthly air temperature calculated?	Please refer to the baseline hydrometeorology report referenced in Section 6.2 for a detailed description of the methodology used to calculate long-term monthly air temperatures. Concurrent temperature records for the Blackwater meteorological stations and active regional climate stations are analysed to assess the suitability of the regional climate stations as predictors of climate conditions for the project area. The Vanderhoof climate data were selected for the development of the long-term synthetic temperature series. Regression relationships between the concurrent mean monthly data were established to create synthetic air temperature records for the two project stations.	No	LDN/UFN	KP		Jaime/Nick	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1597	Appendix 9-E Figure 6.2-2		LDN/UFN		Jun 11, 2022	1	New		No	How long is "long-term"?	The regional Vanderhoof climate data were selected for the development of the long-term synthetic temperature series based on their strong correlation and long period of record (1980-2020). Please refer to the baseline hydrometeorology report referenced in Section 6.2 of this plan.	No	LDN/UFN	KP		Jaime/Nick	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1598	Appendix 9-E Figure 6.2-1		LDN/UFN		Jun 11, 2022	1	New		No	How is the long-term mean monthly precipitation calculated?	Precipitation data from Vanderhoof were used to develop long-term precipitation series for the site climate stations using correlations between measured concurrent records. Please refer to the baseline hydrometeorology report referenced in Section 6.2 of this plan for a detailed description of the methodology.	No	LDN/UFN	KP		Jaime/Nick	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1599	Appendix 9-E Figure 6.2-1		LDN/UFN		Jun 11, 2022	1	New		No	How long is "long-term"?	Synthesized precipitation values were appended to the measured precipitation records for the project stations to develop the long-term precipitation series (1980-2020).	No	LDN/UFN	KP		Jaime/Nick	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing

1600	Appendix 9-E 6.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Why are only 10 of the 11 available stations used?	Section 6.3.1 of this plan states that the hydrological assessment of conditions in the Project area is based on data from 10 of 11 active streamflow stations - this response assumes that the comment is referring to this section rather than 6.3.2. The Project hydrology station on Matthews Creek is too short to allow for reasonable regression relation with regional stations. Please refer to the baseline hydrometeorology report referenced in Section 6.2 of this plan for a detailed description of the hydrological assessment.	No	LDN/UFN	KP		Michael	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1601	Appendix 9-E 7.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Confirm that there is freeboard for the PMF following closure of the TSF surfaces.	The PMF would be conveyed through the closure spillway in closure. Sufficient freeboard will be incorporated during design development to accommodate the storm surge associated with passing the flood.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1602	Appendix 9-E 7.2.3		LDN/UFN		Jun 11, 2022	1	New		No	Revisit the LGO design considering INAP guidance to reduce the amount of seepage	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	BWG	KP		TD	Ready for Submission	CB; 20-Jun	Ready for Publishing
1602	Appendix 9-E 7.2.3		LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Chapter 9 management plans are said to be revised post-permitting. Please ensure comment is carried forward and revisions are included in the updated management plan. Alternatively, please provide a memo that details the LGO design considering INAP guidance to reduce the amount of seepage.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	BWG	KP		TD	Ready for Submission	TD, Aug 16	Ready for Publishing
1603	Appendix 9-E 7.2.10		LDN/UFN		Jun 11, 2022	1	New		No	Revisit the need for lime treatment following LGO design updates	Noted.	No	LDN/UFN	BWG	Lorax		RT	Ready for Submission	RT; June 17	Ready for Publishing
1603	Appendix 9-E 7.2.10		LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Chapter 9 management plans are said to be revised post-permitting. Please ensure comment is carried forward and revisions are included in the updated management plan. Alternatively, please provide a memo that details re-evaluation of lime usage.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	BWG	Lorax		TD	Ready for Submission	TD, Aug 16	Ready for Publishing
1604	Appendix 9-E Table 7.2-5		LDN/UFN		Jun 11, 2022	1	New		No	Table indicates that the influent for the Membrane WTP in post closure will be the ECD, Pit Lake, and TSF C Pond. The text above this table indicates it is "primarily" the ECD. What percentage of treatment in post-closure is attributed to the ECD?	The total annual flow for the Membrane WTP in post-closure is ~6 Mm^3. Of that total, 2.7 Mm^3 of water from the ECD will be treating, equating to 45% of the total annual volume that is treated in this membrane WTP.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1604	Appendix 9-E Table 7.2-5		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1605	Appendix 9-E Table 7.2-5		LDN/UFN		Jun 11, 2022	1	New		No	How will water from the TSF C pond be treated if no cover system is applied to prevent fouling of the membrane WTP?	TSF C pond water will be pumped to the membrane WTP in post-closure if the quality of the water is not suitable for direct discharge.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1605	Appendix 9-E Table 7.2-5		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1606	Appendix 9-E 7.2.10.1	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	remove bracket at end of first sentence	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1606	Appendix 9-E 7.2.10.1	Punctuation	LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Chapter 9 management plans are said to be revised post-permitting. Please ensure comment is carried forward and revisions are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1607	Appendix 9-E 7.2.10.1		LDN/UFN		Jun 11, 2022	1	New		No	Treatment of water for all the sources is not required after Year +17. Clarify that this is only with respect to metals.	The metals treatment plant is planned to treat contact water through Year +17. The plant is designed to remove metals as described in Appendix 5-G of the Application. The membrane treatment plant is planned to operate as needed through Year +17. The plant is designed to remove sulfate, nitrogen species, and metals. Treatment ceases during the Closure period (starting Year +18) as contact waters are directed to the pit to accelerate filling.	RT/TD to review	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1607	Appendix 9-E 7.2.10.1		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1608	Appendix 9-E 7.2.10.2		LDN/UFN		Jun 11, 2022	1	New		No	Confirm that the membrane WTP will be operated in perpetuity.	The Membrane WTP is currently planned to continue operating in perpetuity.	RT/TD to review	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1609	Appendix 9-E 7.2.10.2		LDN/UFN		Jun 11, 2022	1	New		No	The pit lake has to be pumped down to maintain its level below the freeboard elevation in post-closure. How much of the pumped volume will report to the membrane WTP?	All water pumped from the pit lake in Post-Closure will go to the Membrane WTP.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	KP, June 21	Ready for Publishing
1609	Appendix 9-E 7.2.10.2		LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward.Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD; Aug 16	Ready for Publishing
1610	Appendix 9-E 7.3.3	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	last sentence before bullets - remove "are" from in front of the bracketed standards	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1610	Appendix 9-E 7.3.3	Punctuation	LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. please include this edit in updated plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.						TD	Ready for Submission	TD, Aug 16	Ready for Publishing
1611	Appendix 9-E 7.3.3		LDN/UFN		Jun 11, 2022	1	New		No	provide a reference to the applicable plan for the scenario where guidelines are exceeded	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1611	Appendix 9-E 7.3.3		LDN/UFN		Jul 28, 2022	2	New		No	Chapter 9 management plans are said to be revised post-permitting. Please ensure details are included in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD, Aug 16	Ready for Publishing
1612	Appendix 9-E 7.3.4.3		LDN/UFN		Jun 11, 2022	1	New		No	How long will the groundwater table take to return to static conditions once drawndown is stopped at the open pit?	The water table will achieve static conditions around approximately the start of Post-Closure, when the pit lake elevation has reached its target level.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 28	Ready for Publishing
1612	Appendix 9-E 7.3.4.3		LDN/UFN		Jul 28, 2022	2	Follow Up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD, Aug 16	Ready for Publishing
1613	Appendix 9-E Table 7.3-5		LDN/UFN		Jun 11, 2022	1	New		No	Concern that downgradient well locations have not been selected for multiple structures, sighting the need to identify seepage pathways. Why have seepage pathways not already been identified as part of siting of these structures?	Potential seepage pathways have been considered and have informed the need for additional groundwater monitoring sites at the downgradient well locations identified in Table 7.3-5 of Appendix 9-E. The table identifies the general locations, target monitoring intervals, and timing for installation. Final coordinates will be determined in the field base on accessibility in consideration of the potential seepage pathways, and installation depths will be based on observations during drilling in consideration of the target screen zone depth rationales provided.	RT/TD to review	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1613	Appendix 9-E Table 7.3-5		LDN/UFN		Jul 28, 2022	2	Follow Up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD, Aug 16	Ready for Publishing

1614	Appendix 9-E Table 8.1-1		LDN/UFN		Jun 11, 2022	1	New		No	The TSF will passively discharge to Davidson Creek in closure. What measures are in place to ensure water quality is sufficient to be discharged?	Active treatment is planned to occur in the Post-Closure phase to treat mine waters, including water in the TSF (it is noted the TSF is planned to emit a passive discharge in the Post-Closure phase, rather than the Closure phase). The quality of TSF discharge in the Post-Closure phase will be routinely monitored, as described in Application Appendix 9-E, Section 8.3 and Table 9-1. In the event that discharge quality does not meet acceptable standards, BW Gold will follow corrective actions outlined in Section 10 of Application Appendix 9-E.	RT/TD to review	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1615	Appendix 9-E Table 8.1-1		LDN/UFN		Jun 11, 2022	1	New		No	The TSF will passively discharge to Davidson Creek in closure. If water quality from the TSF pond does not meet water quality guidelines, where is it routed to?	The current water balance/water quality model (v13e) predicts concentrations of certain parameters in TSF spillway discharge in the Post-Closure phase exceed their corresponding BC water quality guidelines for aquatic life (please refer to Lorax (2022) under cover of BC Gold Ltd (2022) for further detail). Per ENV (2021), "Exceeding a WQG does not imply that unacceptable risks exists, but rather that the potential for adverse effects may be increased and additional investigation may be required". An application for discharge from the TSF spillway in the Post-Closure phase will be submitted by BW Gold Ltd. as part of a subsequent *Environmental Management Act* permit application or amendment. References: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022. Please see attachment "R1_ENV_EMLI_CSFN_LDN-UFN Comment IDs 102 126 415 490 586 607 610 612 1263 1289 1320 1615 1853.pdf" British Columbia Ministry of Environment and Climate Change Strategy (ENV). 2021. British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture - Guideline Summary. Water Quality Guideline Series, WQG-20. Prov. B.C., Victoria B.C. Accessed at: https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-guidelines/approved-wqgs/wqg_summary_aquaticlife_wildlife_agri.pdf	RT/TD to review	LDN/UFN	Lorax		Meghan	GM		GM; June 28	Ready for Publishing
1615			LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Comment	No	As of July 21, 2022 Okane has not been provided the referenced reports and therefore cannot comment on or resolve this comment. Carry forward to Round 3.	This comment is acknowledged. It is our understanding that BW Gold Ltd. has resent the document being referenced. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 4	Ready for Publishing
1616	Appendix 9-E Table 8.1-1		LDN/UFN		Jun 11, 2022	1	New		No	The TSF will passively discharge to Davidson Creek in closure. If there is no cover over the TSF beaches to prevent fouling of the membrane water treatment plant, what is the quality impact on discharge to Davidson Creek?	Please see Section 8.2.4 - water quality suitable for discharge will be released from the TSF via the spillway in post-closure (not closure). If water quality is not suitable for discharge, it will be pumped to the Membrane WTP. As noted in Chapter 4, reclamation research will be conducted to assess the uncertainty of potential fouling of the treatment membrane.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	KP, June 21	Ready for Publishing
1617	Appendix 9-E 8.2.4		LDN/UFN		Jun 11, 2022	1	New		No	Confirm - is the spillway manually operated?	The spillway will function as a passive overflow channel and will not be manually operated.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1617	Appendix 9-E 8.2.4		LDN/UFN		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD, Aug 16	Ready for Publishing
1618	Appendix 9-E 8.2.4		LDN/UFN		Jun 11, 2022	1	New		No	Confirm - there will be Artemis / Blackwater personnel on-site into post-closure to monitor / manage active pumping of water from the TSFs to the membrane water treatment plant	Adequate personnel will be on-site or otherwise employed into post-closure to implement the post-closure phase water management and treatment plan.	No	LDN/UFN	Lorax		Ryan	GM	Ready for Submission	RT; June 14	Ready for Publishing
1619	Appendix 9-E 8.2.4		LDN/UFN		Jun 11, 2022	1	New		No	How will unsuitable water quality be treated if a cover is not put onto the tailings beaches due to the potential for fouling of the membrane water treatment plant?	As noted in Chapter 4, reclamation research will be conducted to assess the uncertainty of potential fouling of the treatment membrane. Additionally, BW Gold will be dosing antiscalant to mitigate fouling on the membrane. Some fouling is expected over time, and for that, BW Gold will be performing regular CIP cleans to maintain performance.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1619	Appendix 9-E 8.2.4		LDN/UFN		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD, Aug 16	Ready for Publishing
1620	Appendix 9-E 6.1		LDN/UFN		Jun 11, 2022	1	New		No	With regardings to pumping systems at Central Water Transfer Pond - will pumping occur in perpetuity?	The water management plan provides that the Central Water Transfer Pond will remain during the Closure and Post-Closure phases of the project, with pumping occurring in the long-term as required.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1621	Appendix 9-E 6.3.2		LDN/UFN		Jun 11, 2022	1	New		No	Sentence in report states ' groundwater flow in bedrock is expected to be conveyed primarily in highly weathered bedrock'. Why is the completely weathered bedrock horizon in Davidson Creek noted to be low permeability and expected to limit groundwater flow.	Discussion on the hydraulic properties of the completely weathered bedrock is presented in Section 4.3.1.2 of the Groundwater Baseline Report (Appendix 2-J). The unit has a high percentage of fines and a low hydraulic conductivity (the geometric mean of hydraulic conductivity tests completed in the unit is 2E-8 m/s).	No	LDN/UFN	KP			AT/KP	Ready for Submission	AT, June 26	Ready for Publishing
1621	Appendix 9-E 6.3.2		LDN/UFN		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.								TD, Aug 16	Ready for Publishing
1622	Appendix 9-E 7.1		LDN/UFN		Jun 11, 2022	1	New		No	Define in the text that ML waste rock is NAG3 classification, and won't be used for construction	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Jen	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1623	Appendix 9-E Figure 7.1-6		LDN/UFN		Jun 11, 2022	1	New		No	Will treatment be in perpetuity post closure?	Yes, the current water balance/water quality model indicates active treatment will be needed into perpetuity.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1624	Appendix 9-E Figure 7.1-6		LDN/UFN		Jun 11, 2022	1	New		No	What are the long term consequences of disposing of membrane WTP brine on the pit lake water quality?	Predicted pit lake water quality is evaluated in the Life of Mine water balance/water quality model and is presented in Application Section 5.4 and Appendix 5-D. Modeled output for the pit lake includes the addition of the WTP brine stream. To further evaluate the effect of WTP brine on pit lake water quality, a simplified two-cell pit lake model has been developed and results of that model can be provided to the MRC the week of July 10th. This model will be validated through a more robust quantitative pit lake dynamic model under development by Lorax. The results of this model will be integrated with the Application water quality model to evaluate the effects of predicted pit lake stratification on predicted mine and receiving environment water quality. The results of this model exercise will be presented in a memorandum provided to MRC on or before August 15, 2022. Please see "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf"	No	LDN/UFN	Lorax		Alan	GM		GM; June 29	Ready for Publishing
1624	Appendix 9-E Figure 7.1-6		LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Carry forward to Round 3 to allow review of updated hydrodynamic model.	This comment is acknowledged.	No	LDN/UFN	Lorax		Alan	GM		GM; Aug 5	Ready for Publishing
1624	Appendix 9-E Figure 7.1-6		LDN/UFN		Jul 27, 2022	3	Follow Up	information requirement	No	Okane has not been provided this document for review.	This comment is acknowledged. BW Gold provided "R1_CSFN_LDN-UFN Comment IDs 844, 1280, 1281, 1309, 1344 to 1346, 1348, and 1624.pdf" and "R2_EMLI Geoscience LDNUFN Comments 411 1309 1348 1624.pdf" to LDN and UFN on September 8, 2022.		LDN/UFN	Lorax		Alan		09-Sep	GM; Sept 16	Ready for Publishing
1624	Appendix 9-E Figure 7.1-6		LDN/UFN (Mike O'Kane)		Oct 06, 2022	4	Follow Up		Yes	See Round 4 response to #1322	Please see attachment "R4_LDN UFN Comment ID 1322.pdf"		LDN/UFN	Lorax				21-Nov-22	GM; Nov 22	Ready for Publishing
1624	Appendix 9-E Figure 7.1-6		LDN/UFN (Mike O'Kane)		Dec 01, 2022	5	Follow Up		Yes	See Round 5 response to #1322	Please refer to the response provided for Comment 1322.		LDN/UFN	Lorax					TD, Dec 8	Ready for Publishing
1625	Appendix 9-E 7.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Suggest use established waste rock classification, so say NAG3 material rather than ML waste rock to be transparent on what material is being stored where.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Jen	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing

1625	Appendix 9-E 7.2.2		LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Chapter 9 management plans are said to be revised post-permitting. Please address this in the updated management plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.	No	LDN/UFN	Lorax		Jen	GM	Ready for Submission	GM; Aug 5	Ready for Publishing
1626	Appendix 9-E 7.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Embankment raises using all NAG waste materials or just NAG4 and NAG5?	Please see Appendix 3-K (referenced in this section of Appendix 9-E) for a detailed description of the materials used in the embankment raises. NAG4 and NAG5 waste rock and overburden will all be used to construct the TSF embankments.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1626	Appendix 9-E 7.2.2		LDN/UFN		Jul 28, 2022	2	Follow Up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1627	Appendix 9-E 7.2.3		LDN/UFN		Jun 11, 2022	1	New		No	How is lower grade and higher grade LGO ore defined?	Low Grade and High Grade ore will be segregated within the LGO stockpile based on the cutoff grade of the material mined. Based on the mine plan, any ore above an equivalent grade of 0.24g/t Au and below 0.7g/t Au is defined as low grade, and any ore above 0.7g/t is defined as high grade ore. Changes in cut off grades will occur based on changes in gold and silver prices.	No	LDN/UFN	BWG		Klaus	AT/KP	Ready for Submission	RT; June 18	Ready for Publishing
1627	Appendix 9-E 7.2.3		LDN/UFN		Jul 28, 2022	2	Follow Up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1628	Appendix 9-E 7.2.3		LDN/UFN		Jun 11, 2022	1	New		No	Design for the LGO water collection pond not included in the report.	Designs for the mine site water management structures are provided in design reports - the purpose of this plan is to provide an overview of the management and monitoring plan. Please see Appendix 3-N (referenced in this section of Appendix 9-E) for the detailed design of the LGO Collection Pond (Drawing C3740).	No	LDN/UFN	KP		Greg	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1629	Appendix 9-E 7.2.3		LDN/UFN		Jun 11, 2022	1	New		No	Detailed design for the LGO stockpile (showing liner) not included in report - include or reference to relevant report/drawing.	Designs of the LGO Stockpile water management systems are included in Appendix 3-N of the Application (referenced in this section of Appendix 9-E).	No	LDN/UFN	KP			AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1630	Appendix 9-E 7.2.4		LDN/UFN		Jun 11, 2022	1	New		No	Use waste classification scheme to designate what will be stored in the waste stockpiles i.e... NAG4	Waste rock will be segregated based on the approach outlined in the ML/ARD Management Plan (Appendix 9-D of the Application). This includes measures to ensure that only NAG4 and NAG5 waste rock is stored in the waste stockpiles.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1631	Appendix 9-E 7.2.5		LDN/UFN		Jun 11, 2022	1	New		No	Will the WMP be monitored to ensure water is suitable for discharge to the FWR?	The WMP will be routinely monitored as part of the mine site water monitoring program. Please refer to Table 9-1 of Application Appendix 9-E for further detail.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1632	Appendix 9-E 7.2.8		LDN/UFN		Jun 11, 2022	1	New		No	Timeframes for end of closure?	The end of Closure is anticipated to occur in approximately mine Year +45. The actual year in which the pond is decommissioned may vary depending on climate conditions and the decommissioning/reclamation sequencing of mine infrastructure.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1632	Appendix 9-E 7.2.8		LDN/UFN		Jul 28, 2022	2	Follow Up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1633	Appendix 9-E 7.2.10		LDN/UFN		Jun 11, 2022	1	New		No	What does the Metals WTP comprise? There is no further information in this paragraph.	Please refer to Application Appended 5-G for a detailed description of the metals WTP.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1634	Appendix 9-E 7.2.10.1		LDN/UFN		Jun 11, 2022	1	New		No	Treatment of water for all the sources is not required after Year +17' - could be read as there is no need to treat water after year +17.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1634	Appendix 9-E 7.2.10.1		LDN/UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Please revise this in the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1635	Appendix 9-E 7.2.10.1		LDN/UFN		Jun 11, 2022	1	New		No	What is the treatment system(s) involved for WTP A to D	The chemical treatment process in the metal WTP trains utilizes the following: 1. Coagulation - ferric sulphate 2. 1st precipitation stage - hydrated lime 3. 2nd precipitation stage - hydrated lime 4. 3rd precipitation stage - sodium sulphide 5. Flocculation - polyacrylamide polymer 6. pH neutralization for discharge - hydrochloric acid. Please refer to Application Appendix 5-G for further detail.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1636	Appendix 9-E 7.2.10.1		LDN/UFN		Jun 11, 2022	1	New		No	Will metals be monitored to ensure that treatment is removing metals before discharging?	Yes. Operating WTPs will be monitored routinely (weekly minimum for analytical chemistry package) in addition to in-line operator monitoring to ensure treatment is removing metals. Please refer to Table 9-1 of Application Appendix 9-E for further detail.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1637	Appendix 9-E 7.2.10.2		LDN/UFN		Jun 11, 2022	1	New		No	Will the membrane WTP be operated in perpetuity?	Yes, the membrane WTP is anticipated to be operated in the Post-Closure phase in perpetuity.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1638	Appendix 9-E 7.2.10.3		LDN/UFN		Jun 11, 2022	1	New		No	What is the pH criteria for discharge for the lime neutralization system to the TSF?	In the neutralization system, lime is added to the first neutralization tank in the form of calcium hydroxide slurry until pH 10.0 is reached. Neutralized water overflows into the second neutralization tank and is subsequently pumped to the final tailings pump box. Final tailings flow by gravity to the TSF. Please refer to Application Appendix 3-F for further detail.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1639	Appendix 9-E 7.3.3		LDN/UFN		Jun 11, 2022	1	New		No	What is the 'suite of parameters' involved in the weekly testing of influent and effluent WTP waters?	Proposed weekly monitoring of WTP waters includes: 1. Field parameters (pH, conductivity, ORP, temperature) 2. Analytical package (physical parameters, nutrients, major ions, and total and dissolved metals). Please refer to Table 9-1 of Application Appendix 9-E for further detail.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1640	Appendix 9-E 7.3.4.1		LDN/UFN		Jun 11, 2022	1	New		No	Regarding annual sampling of background sites - is there seasonal variation in these wells that needs to be monitored to understand background values or has this been established?	As noted in this section, annual sampling is proposed at a few background groundwater monitoring sites that have several years of seasonal data.	No	LDN/UFN	Lorax			GM	Ready for Submission	KP, June 21	Ready for Publishing
1641	Appendix 9-E 7.3.4.1 pg.. 7-39		LDN/UFN		Jun 11, 2022	1	New		No	What is the standard full suite of metals?	Please see Table 8.3-2 in Appendix 9-E of the Application for the standard full suite of metals that will be monitored.	No	LDN/UFN	Lorax			GM	Ready for Submission	KP, June 21	Ready for Publishing
1642	Appendix 9-E 7.3.4.3		LDN/UFN		Jun 11, 2022	1	New		No	What is the reasoning behind only monitoring some of the bore holes for groundwater quality?	Groundwater monitoring and sampling will be conducted at key sites located downgradient of proposed facilities. Monitoring wells located in the footprints of proposed facilities will be decommissioned and no longer monitored/sampled.	No	LDN/UFN	Lorax			GM	Ready for Submission	KP, June 21	Ready for Publishing
1643	Appendix 9-E 7.3.4.3 pg. 7-41		LDN/UFN		Jun 11, 2022	1	New		No	Will background monitoring conditions include quality and flow rates?	Section 7.3.4.3 describes groundwater monitoring locations - please see Section 7.3.4.1, which describes groundwater quality monitoring, and Section 7.3.4.2, which describes groundwater flow monitoring.	No	LDN/UFN	KP		Jordan/Cindy	AT/KP	Ready for Submission	KP, June 29	Ready for Publishing
1644	Appendix 9-E 8.1		LDN/UFN		Jun 11, 2022	1	New		No	How are non-point source discharges defined?	Per ENV (2022), non-point discharges were defined as " Discharge of effluent that does not meet the definition for point-source discharge. Nom-point-source discharge is effluent that is not collected and discharged through a final discharge point, but rather the effluent infiltrates to ground at unknown volumes, locations and times (e.g. a waste pile)." Reference: BC Ministry of Environment and Climate Change Strategy (ENV). 2022. Factsheet, Waste Discharges: Authorizing Point and Non-Point Source Discharges to Ground. https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/guidance-documents/7276_env_rob_dtg_factsheet.pdf	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing

1645	Appendix 9-E 8.2.2		LDN/UFN		Jun 11, 2022	1	New		No	Will these ponds need periodically cleaning out silt to restore life of structure.	The design and management of SCPs is described in Appendix 9-A (Surface Erosion Prevention and Sediment Control Plan): sediment removal and disposal will be performed as required; and sediment levels in SCPs will be measured monthly or prior to a predicted storm event to verify that the minimum pond depth below the outlet pipe invert is present.	No	LDN/UFN	KP		Stephanie	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1646	Appendix 9-E Table 8.2-1		LDN/UFN		Jun 11, 2022	1	New		No	Is the Al SBEB guideline pH dependent?	No. Baseline pH values were considered in the development of the proposed SBEB. As a result of that analysis, however, consideration of pH in the SBEB was deemed unnecessary. Please refer to Application Appendix 5-E for further detail.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1647	Appendix 9-E 8.2.4		LDN/UFN		Jun 11, 2022	1	New		No	Is there sufficient storage area for water that doesn't meet discharge guidelines to Davidson Creek, i.e.. if the Membrane NF WTF fails to treat to expected criteria.	Yes, sufficient contingency storage will be allowed for to temporarily manage water that does not meet discharge guidelines.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1648	Appendix 9-E Table 8.3-1		LDN/UFN		Jun 11, 2022	1	New		No	So this table won't apply to every discharge point during the different phases - according to what is written in the paragraph?	In general, the monitoring regime presented in Table 8.3-1 of Application Appendix 9-E is anticipated to apply to all regulated discharge points when discharging. Because the *Environmental Management Act* Application has been submitted for the Construction and Operation phases only, however, the specifics of discharge locations and monitoring regimes for the Closure and Post-Closure phases are not defined at this time.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1649	Appendix 9-E 8.3.2 pg.. 8-12		LDN/UFN		Jun 11, 2022	1	New		No	Discharge evaluated against SBEBs also?	Yes, discharges will also be evaluated against the approved SBEB.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1650	Appendix 9-E Table 8.3-2		LDN/UFN		Jun 11, 2022	1	New		No	Are the detection limits for metals lower than the guidelines they will be compared against?	Yes. Please refer to comment response 609.	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1650	Appendix 9-E Table 8.3-2		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	follow up		No	As we have not received the (referenced doc in comment 609) and have not had the opportunity to review it, we can't comment or resolve this comment. Carry forward to Round 3.	This comment is acknowledged. It is our understanding that BW Gold Ltd. has resent the document being referenced. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax		Meghan	GM		GM; Aug 4	Ready for Publishing
1651	Appendix 9-E 10		LDN/UFN		Jun 11, 2022	1	New		No	Make reference to the ML//ARD MP here	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	CB; 20-Jun	Ready for Publishing
1652	Appendix 9-E 10		LDN/UFN		Jun 11, 2022	1	New		No	Why is the lime neutralization (of the LGO seepage) not mentioned as a treatment plant?	Section 10 of Appendix 9-E summarizes potential nonconformities associated with mine site discharges. Treated waters released from the lime neutralization system do not represent a discharge as this water is directed to the TSF for further management.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 29	Ready for Publishing
1653	Appendix 9-E 11		LDN/UFN		Jun 11, 2022	1	New		No	With regards to TSF D long-term impacts on groundwater - is the TSF lined with geosynthetic, how would the seepage flow paths occur?	Please see Appendix 3-K for a detailed description of the TSF design features, and Section 3.5.3.12 of Chapter 3 for a description of seepage control measures.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1654	Appendix 9-E Table 11-1 pg.. 11-4		LDN/UFN		Jun 11, 2022	1	New		No	Re TSF pH - could processing circuit include a desulfurisation plant to remove sulfides from tailings before deposition into TSFs to reduce risk of low pH?	No updates to the process plant are proposed at this time.	No	LDN/UFN	Lorax		John	GM	Ready for Submission	GM; June 28	Ready for Publishing
1654	Appendix 9-E Table 11-1 pg.. 11-4		LDN/UFN (OKane_Kirstine Malloch)		Jul 22, 2022	2	follow up		No	Would suggest that this is looked into to reduce risk of poor water quality from the TSF	This comment is acknowledged.		LDN/UFN	Lorax				Ready for Submission	GM; Aug 10	Ready for Publishing
1655	Appendix 9-E Table 11-1 pg.. 11-4		LDN/UFN		Jun 11, 2022	1	New		No	TSF groundwater seepage - lining of structures to reduce this risk?	Please see Appendix 3-K for a detailed description of the TSF design features, and Section 3.5.3.12 of Chapter 3 for a description of seepage control measures.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1656	Appendix 9-E Table 11-1 pg.. 11-5		LDN/UFN		Jun 11, 2022	1	New		No	Regarding WMP water quality exceedances - ensure adequate monitoring of all inputs into the WMP to understand where the problem is	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. It is noted the monitoring plan summarized in Table 9-1 of Appendix 9-E includes a robust monitoring regime for WTPs, which represent key sources of water input to the WMP.	No	LDN/UFN	Lorax		Meghan	GM	Ready for Submission	GM; June 29	Ready for Publishing
1657	Chapter 1 1.3.4.2		LDN/UFN		Jun 11, 2022	1	New		No	There are two private properties on well water downstream of the mine. How far downstream are they?	There are two groundwater wells at approximately 20km (Mills Ranch) and 26km (TTM Resources), located downstream of the Project.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1657	Chapter 1 1.3.4.2		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	Information Requirement	No	Provide documentation showing water quality has not been impacted in these wells	There have been no Project related effects assessments completed for groundwater wells because Project related activities have not occurred. See response to Comment #1659 for a summary of the assessment of potential impacts to users of the Mills ranch groundwater well.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1658	Chapter 1 1.3.4.2		LDN/UFN		Jun 11, 2022	1	New		No	There are two private properties on well water downstream of the mine. What aquifer are they screened across?	No information about the aquifers is available in the provincial database for the two private wells. There are no mapped aquifers existing in the provincial database within the LSA or RSA boundaries, likely due to the undeveloped nature of the Project, as identified in the 2020 Groundwater Baseline Report (Appendix 2-J of the Application).	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1659	Chapter 1 1.3.4.2		LDN/UFN		Jun 11, 2022	1	New		No	There are two private properties on well water downstream of the mine. What impact would the mine have on these wells?	The Human Health Risk Assessment effects assessment (Appendix 6-A of the Application) examined potential impacts to: "a full-time Indigenous resident on Tatelkus Lake 28 near the outlet of Tatelkuz Lake or a resident at the adjacent Tatelkuz Lake Resort (Mills ranch), primarily using drinking water sources from groundwater wells plus surface water during time away from home while out on the land, and engaging in hunting, fishing and berry/plant picking." The overall conclusion (including exposure to air/water/soil/berries and plants/country foods) is that there are no adverse effects on human health predicted.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1660	Chapter 1 1.3.5 Processing Plant		LDN/UFN		Jun 11, 2022	1	New		No	Has research been done to get to the 50% thickened tailings for deposition?	Yes, tailings thickening test work was completed during development of the processing plant design.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1661	Chapter 1 1.3.6		LDN/UFN		Jun 11, 2022	1	New		No	Is there a reason for the slow ramp up on the mill? Specifically from year +6 to +10. Seems slightly accelerated processessing could allow for LGO material to be removed from the stockpile earlier	BW Gold has optimized the mine plan to have a three-staged approach, beginning with a smaller mill rate to significantly reduce the up-front capital requirements. Starting small also means that there is less mill capacity to take the low-grade ore coming from the Open Pit and the risks associated with a very large mine at start up are reduced. This means that the low-grade ore stockpile grows in early years, and then is drawn down in later years once the mine is running and the cashflow from operations has funded the second- and third-stage expansions, which make the lower grade ore economic due to economies of scale.	RT/TD to review	LDN/UFN	ERM	BWG	Tonia	RT	Ready for Submission	RT; June 18	Ready for Publishing
1662	Chapter 1 1.3.6	Punctuation	LDN/UFN		Jun 11, 2022	1	New		No	Last paragraph, second sentence: Water quality suitable for discharge, will be released to Davidson Creek via the TSF Spillway. Remove comma	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1663	Chapter 1 1.3.6		LDN/UFN		Jun 11, 2022	1	New		No	Last paragraph: How is water going to be evaluated to determine if it is suitable for discharge to the environment? The TSF spillway will reportedly be passively discharging, so it is not clear how this discharge can be controlled if it does not meet appropriate water quality criteria.	Water in the TSF ponds will be monitored for quality, as outlined in Appendix 9-E. While monitoring will occur at the frequency that is outlined in Appendix 9-E, as the pond rises, but prior to the point of discharge, if the quality is suitable, the pond will be allowed to continue rising and discharge passively via the closure spillway. If, on the other hand, monitoring suggests the quality is not suitable for discharge, prior to the water level rising to the discharge elevation, the pond water will be pumped to the membrane WTP for treatment and release to Davidson Creek.	No	LDN/UFN	KP	Lorax	Meghan	AT/KP	Ready for Submission	KP, June 30	Ready for Publishing
1664	Chapter 1 Table 1.3-5		LDN/UFN		Jun 11, 2022	1	New		No	Confirming you mean KMPG and not KPMG (financial consultants) for completion of the economic impact assessment	BW Gold confirms that the correct company is KPMG. BW Gold appreciates the comment. However, the application is not being updated.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1665	Chapter 1 Table 1.3-3		LDN/UFN		Jun 11, 2022	1	New		No	No mention of when the Membrane WTP is to be constructed - it is not mentioned in this table	As stated in Section 1.3.5: "A Membrane WTP will treat supernatant pond water overflow from TSF C during operations in Year +1 to Year +23. Water treatment is required to reduce the water storage inventory in the TSF only during wet periods." Therefore, it will be constructed as part of the Construction Phase Activities (see Table 3.3-3 in Chapter 3). Specifics on timing will be refined and provided in subsequent iterations of the closure plan as additional information is collected for the site during operations.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1666	Chapter 1 1.1 second paragraph	grammar	LDN/UFN		Jun 11, 2022	1	New		No	Mining will initially targeting high grade, near-surface….. change targeting to target	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT: June 26	Ready for Publishing

1667	Chapter 1 All		LDN/UFN		Jun 11, 2022	1	New		No	inconsistency with using "mine site" and "project site". Pick one and use throughout.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Valerie/Tonia	RT	Ready for Submission	RT: June 26	Ready for Publishing
1668	Chapter 1 1.3.5		LDN/UFN		Jun 11, 2022	1	New		No	Text notes that the LGO stockpile has a low permeability foundation, a liner system across the footprint area. What is the nature of the low permeability liner over the majority of the area, what is the anticipated permeability?	The Liner System Design for the LGO stockpile is detailed in Section 3.5.5.11 of Chapter 3: "The LGO liner system will incorporate two types of low permeability liners, including compacted glacial till and HDPE geomembrane, which will limit seepage entering the groundwater by providing physical separation and promoting drainage to the contact water collection channels. The till liner material will meet the Zone S material specifications producing a relatively low permeability subgrade comprised of gravels, sands, silts, and clays. An HDPE liner will be installed where water ponding or concentrated flows are expected. Generally, the HDPE will be installed within the contact water collection channels and at the LGO Collection Pond. The HDPE liner is designed with a 1,000 mm overlap with the till liner to minimize water loss as flows are conveyed from the stockpile foundation into the collection channels."	No	LDN/UFN	ERM	KP	Tonia	AT/KP	Ready for Submission	RT; June 23	Ready for Publishing
1669	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	Redundant: WHMIS 2015 is already aligned with GHS. If WHMIS is being followed by standard, GHS is as well.	BW Gold will revise the text to indicate that WHMIS 2015 is aligned with GHS in the Chemicals and Materials Storage, Transfer and Handling Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1670	Chemicals and Materials Storage Plan		LDN/UFN		Jun 11, 2022	1	New		No	It's not enough to simply say "qualified persons" the QP need to be defined for the management plan. Specifically, who are the QP that will fulfill the roles and objectives? This is a detailed management plan, and this is extremely generic and vague.	The qualified persons are mentioned and described in Table 3-1 (Blackwater Roles and Responsibilities) of the Chemicals and Materials Storage, Transfer and Handling Plan. Qualified professionals, such as a chemist, have been or will be retained to review objectives and conduct various aspects of the plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1670	Chemicals and Materials Storage Plan Section 3.1		LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	Yes	Unresolved: they need to specify who the qualified person is in the management plan, specifically. What position does this person hold and what are the qualifications?	A qualified person as defined in BC would be a Professional chemist with a professional association with the Association of the Chemical Profession of British Columbia.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 11	Ready for Publishing
1670	Chemicals and Materials Storage Plan Section 3.1		LDN/UFN		Aug 31, 2022	3	Follow Up		No	Designate this role in the management plan and in table 3-1.	The following text will be added to the Table 3.1-1 of the Chemicals and Materials Storage, Transfer and Handling Plan regarding Qualified Professional and Qualified Persons- 'This may include a professional chemist or other qualified/accredited professional or person.'		LDN/UFN	ERM		Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
1671	Chemicals and Materials Storage Plan Section 4.1		LDN/UFN		Jun 11, 2022	1	New		No	Provincial legislation worth reviewing/including is BC OHS section 30: laboratories.	The BC Occupational Health and Safety (OHS) Regulation is applicable to "most workplaces in BC, except mines and federally chartered workplaces" (https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation). As stated in the legislation, Part 30 Laboratories applies “to rooms, buildings or areas in buildings equipped with apparatus, equipment, chemicals or test animals and used for research, quality control, performance of tests, experiments or measurements, photographic development, or the preparation of drugs or other products in the natural sciences.” Thus, while the BC OHS regulation is not directly applicable to the Blackwater Project, BW Gold will look to the legislation for practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1671	Chemicals and Materials Storage Plan Section 4.1		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	Unresolved: any health and safety regulations not covered in the mines act must follow best practices, which should default to worksafe BC regulations for these topics, which includes section 4, 5, 6 and 30. The management plan should reflect this as the BC OHS regulations would follow best management practices	As indicated in the Round 1 response the BC OHS regulation will be referred to for best management practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP). In response to the reviewer comment sections 4, 5, 6, and 30 of the regulation will be reviewed specifically in the revision of the CMSTHP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1672	Chemicals and Materials Storage Plan Section 5.2.1		LDN/UFN		Jun 11, 2022	1	New		No	Hazardous waste is NOT exempt from WHMIS for labelling and SDS. BC OHS legislation specifies this. The mines act does not contain enough information regulating laboraties and BC OHS regulations should be referenced.	Hazardous Waste is regulated by the *Environmental Management Act*. Section 10 of the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP) provides protocols for siting hazardous waste facilities, hazardous waste registration and shipping: BW Gold will ensure that the siting of the hazardous waste facility on site meets Part 2 (Minimum Siting Standards for All Hazardous Waste Facilities) of the Hazardous Waste Regulations. A Waste Generator Registration Number is required for anyone who produces, within a 30-day period, hazardous waste in quantities greater than the quantity set out in Column II of Schedule 6 of the Hazardous Waste Regulations. Registration quantities are provided in Table 10.3-1 of the CMSTHP. Hazardous waste manifests are required for all hazardous waste generated on site. BW Gold will ensure that hazardous waste manifests will follow Section 46 of the Hazardous Waste Regulations. A weekly inspection program will be utilized to ensure that all hazardous waste is managed according to regulatory requirements. While the BC OHS regulation is not applicable to the Blackwater Project, BW Gold will look to the legislation for additional Hazardous Waste handling practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1673	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	The mines act says specifies that the code doesn't apply to hazardous waste, so therefore provincial legislation, BC OHS, would as a result. I would strongly suggest reviewing all legislation that pertains to chemicals and laboratories.	The BC Occupational Health and Safety (OHS) Regulation is applicable to "most workplaces in BC, except mines and federally chartered workplaces" (https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation). As stated in the legislation, Part 30 Laboratories applies “to rooms, buildings or areas in buildings equipped with apparatus, equipment, chemicals or test animals and used for research, quality control, performance of tests, experiments or measurements, photographic development, or the preparation of drugs or other products in the natural sciences.” Thus, while the BC OHS regulation is not applicable to the Blackwater Project, BW Gold will look to the legislation for practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1673	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved: any health and safety regulations not covered in the mines act must follow best practices, which should default to worksafe BC regulations for these topics, which includes section 4, 5, 6 and 30. The management plan should reflect this as the BC OHS regulations would follow best management practices	As indicated in the Round 1 response the BC OHS regulation will be referred to for best management practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP). In response to the reviewer comment sections 4, 5, 6, and 30 of the regulation will be reviewed specificly in the revision of the CMSTHP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing

1674	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	Grinding Media is a non-specific term and the type/composition needs to be listed	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1675	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	quick lime is not an IUPAC recognized chemical term. Use calcium oxide instead.	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1676	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	Flocculent is a non-specific term and the type/composition needs to be listed	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1677	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	hydrated lime is not a real chemical name, and the IUPAC name should be used.	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1678	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	Specify what reagents are used in "CIP Chemicals"	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1679	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	Define the acronym "TMT"	The Chemicals and Materials Storage, Transfer and Handling Plan will be reviewed for undefined acronyms and updated accordingly. The acronym TMT refers totrimercapto-triazine. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1680	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	Define what is in "Anti-scalant" with IUPAC naming	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1681	Chemicals and Materials Storage Plan Section 6.22		LDN/UFN		Jun 11, 2022	1	New		No	overall, chemical terms should follow only one naming standard, IUPAC, and generic terms need to be defined as to their specific chemical composition.	The Chemicals and Materials Storage, Transfer and Handling Plan will be updated to include specific chemicals and use the IUPAC-recognized chemical term. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1682	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	Observation: any chemist would not require the mines act 2.13.2(2). A Chemist or other QP should know what information is needed for correct storage. This is specifically here if someone is negligent.	BW Gold acknowledges the comment, no response is required.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	CB; 20-Jun	Ready for Publishing
1682	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	while resolved, this area is still of concern as it is attempt to protect BW from negligence.	BW Gold acknowledges the comment and appreciates the input, and will be taking measures to implement the correct (and safe) storage, transfer, and handling of chemicals.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1683	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	Again, BC OHS regulations provide far more information that was is covered in the mines act. 2.3.3 does not provide enough information: example: what does "well ventilated" mean, specifically? BC OHS regulations cover this.	Well ventilated refers to ventilation that is sufficient to control worker exposure to airborne contaminants and/or keep airborne levels below recommended exposure limits. BW Gold will look to the BC OHS regulations for best practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1684	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	The BC fire code is an inadequate document for the storage and handling of hazardous materials found in a lab.	The BC Fire Code is a legal requirement. BW Gold will look to the BC OHS regulation for best practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1684	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	unresolved: while BC fire code is a legal requirement, but it is not the only legal requirement and documentation that should be consulted for best management practices	As stated in Round 1 response to Comment 1684 and 1685, the BC OHS regulation will be consulted for best management practices regarding storage and handling of hazardous materials at the mine site (this includes both indoor and outdoor storage).		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1685	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	The BC fire code is not a comprehensive document to determine the compatibility of substances, and BC OHS regulations should be referenced in addition to a chemist. You cannot determine chemical compatibility based on classification alone, specific chemical composition must be taken into account.	As stated in the Chemicals and Materials Storage, Transfer and Handling Plan: "Table 7.2-1 identifies materials that cannot be stored together. This chart should be used with a chemicals and materials SDS, container information, and storage location to determine incompatible and compatible dangerous goods." BW Gold will look to the BC OHS regulation for best practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing

1685	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	resolved. Observation: the authors of this management plan have no practical experience, knowledge or training with waste compatibility.	The comment indicates that the response is resolved therefore BW Gold has not provided an additional follow-up response.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1686	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	Provincial legislation that needs to be followed is BC OHS section 30: laboratories, not just the fire code	The BC Occupational Health and Safety (OHS) Regulation is applicable to "most workplaces in BC, except mines and federally chartered workplaces" (https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation). As stated in the legislation, Part 30 Laboratories applies "to rooms, buildings or areas in buildings equipped with apparatus, equipment, chemicals or test animals and used for research, quality control, performance of tests, experiments or measurements, photographic development, or the preparation of drugs or other products in the natural sciences." Despite this, BW Gold will look to the BC OHS regulation for best practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1686	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	Unresolved: any health and safety regulations not covered in the mines act must follow best practices, which should default to worksafe BC regulations for these topics, which includes section 4, 5, 6 and 30. The management plan should reflect this as the BC OHS regulations would follow best management practices	As indicated in the Round 1 response the BC OHS regulation will be referred to for best management practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP). In response to the reviewer comment sections 4, 5, 6, and 30 of the regulation will be reviewed specificly in the revision of the CMSTHP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1687	Chemicals and Materials Storage Plan Section 8.1-1		LDN/UFN		Jun 11, 2022	1	New		No	The summary of safe handling procedures should be cleaned up and follow WHMIS documentation. The summary is often generic, lacking, or overly specific. For instance, in handling Hydrochloric acid, it specifies "when diluting, always add acid to water". This practice is true for all acids and bases and is missing. The entire section is inconsistent and should be re-written by a a chemist, as it does not appear to be written by a qualified person.	BW Gold acknowledges the comment and will update the Chemicals and Materials Storage, Transfer and Handling Plan (Table 8.1-1) where WHMIS documentation is not specifically stated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1688	Chemicals and Materials Storage Plan Section	Worker training	LDN/UFN		Jun 11, 2022	1	New		No	Workers should complete WHMIS training and this should be specified.	Section 8.1.1 of the Chemicals and Materials Storage, Transfer, and Handling Plan identifies the WHMIS education that will be provided to workers and training required.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1689	Chemicals and Materials Storage Plan Section	Labelling	LDN/UFN		Jun 11, 2022	1	New		No	A review of correct labelling should be done. The 'Workplace Labelling' conventions are beyond what is required, are not practical for workers, and realistically set an unattainable standard. A chemist should re-write this entire section.	BW Gold acknowledges the comment. Appropriate labels are a requirement of the Code (Sections 2.13.5, 2.13.6, 2.13.7 and 2.13.10) and an important aspect of workplace safety, with hazardous chemicals or material being transported to the mine site, out of the mine site and within the mine site.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1689	Chemicals and Materials Storage Plan Section	Labelling	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	unresolved: appropriate labelling is an important aspect, but the section should be re-written with a more practical approach while still following best management practices. I would recommend someone with relevant experience re-write this portion, that takes into account what is actually practical for workers to do on-site. Setting un-attainably high labelling standards means no one will realistically follow them. Labelling standards can still be set within legal requirements and best practices that are easier, simpler, and so workers will actually follow them.	BW Gold will use the labelling practices indicated in Section 8.1.2 of the Chemicals and Materials Storage, Transfer, and Handling Plan. Alternative labelling procedures will be provided (and updated in the plan) if non-conformance and/or labelling errors are documented during inspection/review of mine and mill site facilities (Section 11 and 12).		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1689	Chemicals and Materials Storage Plan Section	Labelling	LDN/UFN		Aug 31, 2022	3	Follow up		No	unresolved: the labelling practices in section 8.12 . Are the issue in this comment, the standards set are unrealistic for workers and there is better methodology that will still conform to regulation that are attainable to workers. This section should be re-written to incorporate a realistic labelling standard for workers	BW Gold maintains the response provided to the Round 1 and 2 comments. Labelling methods in Section 8.1.2 of the of the Chemicals and Materials Storage, Transfer and Handling Plan was provided to meet the requirements of Section 2.13.5, 2.13.6, 2.13.7 and 2.13.10 of the Code (and required by the Joint Application Information Requirements). The reviewer has not provided any specific comment on what part of the labelling section is unrealistic for workers. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	TD, Sept 14	Ready for Publishing
1689	Chemicals and Materials Storage Plan Section	Labelling	LDN/UFN		Oct 06, 2022	4	Follow up		No	While the labelling methods may technically meet regulation, it is generally understood by competent chemistry professionals that there are better methods that meet regulation than what is set out in documentation. It is not the responsibility of this technical review to provide specific solutions, but to indicate deficiencies. Recommend contacting someone knowledgable to change the practices to a	BW Gold acknowledges the recommendation.		LDN/UFN	ERM		Tonia/Michelle			TD, Oct 17	Ready for Publishing
1689	Chemicals and Materials Storage Plan Section	Labelling	LDN/UFN		Dec 01, 2022	5	Follow up	Potential Permit Condition	Yes	At the Nov 9th issues resolution meeting, BW Gold agreed to have a QP review and edit the Chemical and Materials Storage Plan. We will wait to review those updates before closing this comment.	BW Gold acknowledges LDN and UFN's request for a permit condition to have a QP review and edit the Chemical and Materials Storage Plan and will defer to EMLI and ENV on the inclusion of this request as a permit condition.		LDN/UFN	BWG					TD, Dec 19	Ready for Publishing

1690	Chemicals and Materials Storage Plan Section 8.2-1	PPE	LDN/UFN		Jun 11, 2022	1	New		No	The list of required PPE is too generic. What types of gloves, respirator filters, respirators and other equipment needs to be specific. There is a specific list of chemicals and risks associated, and therefore the PPE should also be clearly defined.	The description of the Personal Protective Equipment (PPE) was intended to list the general PPE standards. Reference to the Occupational Health and Safety (Section 8.6.15) will be provided in an updated version of the Chemicals and Materials Storage, Transfer and Handling Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1690	Chemicals and Materials Storage Plan Section	PPE	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	unresolved: there are often no regulations or legal documentation to follow for some PPE. Example: specific types of gloves are unregulated, but best and safest practices would dictate that specific types of gloves are used for specific types of chemicals. This section very clearly demonstrates the need for a chemists input, as this information isn't in the regulations but is extremely important. The authors do not appear to have the relevant experience to understand and specify the particular types of PPE that should be used for each chemical.	The reference provided in response to Round 1 comment is the Blackwater Gold Occupational Health and Safety Plan, with Section 8.6.15 detailing the requirements of adequate Personal Protective Equipment for each work activitiy (and not a regulation or legal documentation). These requirements along with Table 8.2-1 in the Chemicals and Materials Storage, Transfer and Handling Plan are intended to provide workers instruction on what PPE should be worn for each specific task and chemical. An exhaustive list is not provided because it would require updating each time a new activity is required or a new chemical is brought to site and/or if standards are revised. As indicated in Section 8.6.15 of the Occupational Health and Safety Plan, the neccessary PPE for the task/chemical will be identified in a job hazard analysis completed/reviewed by a qualified person before each activity.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT: Aug 11	Ready for Publishing
1690	Chemicals and Materials Storage Plan Section	PPE	LDN/UFN		Aug 31, 2022	3	Follow up		No	recommend that elements of this follow up comment be incorporated into the management plan specify how PPE for tasks will be identified and by which QP before each activity	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	TD, Sept 14	Ready for Publishing
1691	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	Please reference BC OHS regulations here.	The BC Occupational Health and Safety (OHS) Regulation is applicable to "most workplaces in BC, except mines and federally chartered workplaces" (https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation). As stated in the legislation, Part 30 Laboratories applies "to rooms, buildings or areas in buildings equipped with apparatus, equipment, chemicals or test animals and used for research, quality control, performance of tests, experiments or measurements, photographic development, or the preparation of drugs or other products in the natural sciences." Despite this, BW Gold will look to the BC OHS regulation for best practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1691	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	Unresolved: any health and safety regulations not covered in the mines act must follow best practices, which should default to worksafe BC regulations for these topics, which includes section 4, 5, 6 and 30. The management plan should reflect this as the BC OHS regulations would follow best management practices	As indicated in the Round 1 response the BC OHS regulation will be referred to for best management practices that can be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP). In response to the reviewer comment sections 4, 5, 6, and 30 of the regulation will be reviewed specificly in the revision of the CMSTHP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1692	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	provide the rationale for listing only some specific transfer practices, but not all? There are far more hazardous substances than what is provided as an example	Specific transfer practices were based on draft or high-level planning at the time of developing the Chemicals and Materials Storage, Transfer and Handling Plan. As planning becomes more advanced, the plan will be updated to include a comprehensive list of transfer practices based on actual practices. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1693	Chemicals and Materials Storage Plan Section	spill prevention	LDN/UFN		Jun 11, 2022	1	New		No	The reality is that spills happen regardless of precautions. It seems an oversight that a spill protocol was not developed and is entirely absent from this document.	Additional actions on spill prevention methods are provided in the Fuel Management and Spill Control Plan (Appendix 9-L; referenced in the Chemicals and Materials Storage, Transfer and Handling Plan).	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1694	Chemicals and Materials Storage Plan Section	training	LDN/UFN		Jun 11, 2022	1	New		No	Workers should receive WHMIS training	Section 8.1.1 of the Chemicals and Materials Storage, Transfer, and Handling Plan identifies the WHMIS education that will be provided to workers and training required.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1695	Chemicals and Materials Storage Plan Section	Procurement protocol	LDN/UFN		Jun 11, 2022	1	New		No	It is not enough to say "a protocol will be developed". A procurement protocol would fall into the direct purview of this management plan and should be included.	A procurement protocol will be finalized prior to mine construction. The protocol will be incorporated into the Chemicals and Materials Storage, Transfer and Handling Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1696	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	The EM, and Health and Safety manager are not qualified to determine compatibility based on chemical composition, unless they are a professional chemist. A chemist should do this. Also, "Materials Management" is a previously undefined role. Who is this person, what is the role, and why are they not in Section 3?	The Health and Safety and Materials Management staff are considered Departmental Managers, defined in Section 3 of the Chemicals and Materials Storage, Transfer and Handling Plan. The EM and Departmental Managers are responsible for the implementation of the plan, and the EM is responsible for retaining the services of a chemist or qualified professional to determine compatibility based on chemical composition.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1696	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	unresolved: update the management plan to reflect these comments	BW Gold commits to updating the plans/procedures as outlined in Round 1 responses. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1697	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	Strongly recommend included spill containment and protection measures for hazardous waste as part of the management plan	Section 10 of the Chemicals and Materials Storage, Transfer and Handling Plan will be updated to specifically state spill containment and protection measure for hazardous waste. BW Gold recognizes that management plans may need various updates as a result of permitting. BW Gold has discussed the best approach with EMLI, and we will track all edits and submit updated plans toward the end of the Application Review process. As appropriate, updated plans will then be filed with other relevant regulators and Indigenous nations.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT: June 27	Ready for Publishing
1698	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	There is no mention of incompatible wastes, separate storage, and composition of wastes. Hazardous wastes carry the same, if not more, risks than the chemicals on site and should receive the same treatment in the management plan. Define what wastes are being generated, their compatibility, storage requirements, etc...	Incompatibility guidance applies to both waste and chemicals. Section 10 was provided with the level of detailed required for hazardous wastes being transported from their individual collection points to a collection location before the hazardous waste is transported off site with appropriate contractors to an approved waste or recycling facility.	RT/TD to review	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing

1699	Chemicals and Materials Storage Plan Section	Inspections	LDN/UFN		Jun 11, 2022	1	New		No	there are virtually no specific details outlined in the management plan for hazardous waste, unsure how an inspection could be carried out as a result.	Section 10 was provided with the level of detailed required for hazardous wastes being transported from their individual collection points to a collection location before the hazardous waste is transported off site with appropriate contractors to an approved waste or recycling facility.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1699	Chemicals and Materials Storage Plan Section	Inspections	LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	unresolved: the level of detail included does not follow best practices	Section 10.2 of the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP) indicates that only passive storage of hazardous wastes is contemplated (i.e., only activity in the storage facility is the placement, retrieval, or inspection of the hazardous waste). Therefore the level of detail provided Section 10 of the CMSTHP is sufficient for regulatory compliance in terms of registration and hazardous waste manifests prior to shipping off-site. The inspection program listed in Section 10.5 also refers to Appendix B that provides an inspection form template that will be used and/or modified for the regulatory requirements and specific locations.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1699	Chemicals and Materials Storage Plan Section	Inspections	LDN/UFN		Aug 31, 2022	3	Follow up		No	partial resolution: while it may meet regulatory compliance, this is a bare minimum standard and as a chemist, advise a higher level of detail for hazardous waste; specifically because this is the highest risk area.	BW Gold acknowledges the Chemicals and Materials Storage, Transfer and Handling Plan is a living document and along with the development of the plans and specification of the hazardous waste storage facility, additional 'higher level' detail can be added to the CMSTHP. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	TD, Sept 14	Ready for Publishing
1700	Chemicals and Materials Storage Plan Section 10-1		LDN/UFN		Jun 11, 2022	1	New		No	Have a chemist review/rewrite this entire section. The language used and knowledge of the topic is completely inadequate. Example "ensure proper segregation of imcompatible materials e.g. basic and acidic materials will not be stored in the same container..." while technically correct, you should not store them in the same container since they would immediately mix and react, does not demonstrate a firm grasp of the requirements.	BW Gold acknowledges the comment. No response is required.	No	LDN/UFN	ERM		Michelle	RT	Ready for Submission	RT; June 27	Ready for Publishing
1700	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	unresolved: this section needs to be reworded. The interpretations of how it is written could have serious safety consequences	Table 11-1 of the Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP) summarizes the mitigation measures for effective management of hazardous materials and petroleum products. This is not intended to be a list of instruction for interpretation or implementation by all employees because that level of interpretation and understanding is not anticipated from the general workforce. Correct storage of chemicals will be implemented by qualified personnel and workers will be required to follow and maintain the established handling and storage practices (depending on the chemicals present at any given time). Workers handling and storing chemicals will be required to review and adhere to the health and safety procedures and requirements detailed in the CMSTHP.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1700	Chemicals and Materials Storage Plan Section		LDN/UFN		Aug 31, 2022	3	Follow up		No	unresolved: a management plan should still retain clear, unambiguous langauge. Including language that can be misinterpreted, despite the intent of the document, is negligent	The language referenced by the reviewer is similar to that provided in Section 2.3.3 of the Code (a requirement of the Application): "The manager shall ensure that all dangerous or potentially hazardous materials are stored in designated storage areas, acceptable to an inspector, which are well ventilated to prevent any accumulation of dangerous fumes and so arranged that incompatible materials, which could produce a harmful reaction if combined, are adequately separated." BW Gold maintains the response provided in the Round 2 comment. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	TD, Sept 14	Ready for Publishing
1701	Chemicals and Materials Storage Plan Section	Qualified persons	LDN/UFN		Jun 11, 2022	1	New		No	An EP (environmental professional) is not recognized as a qualified professional (only a accredited practitioner) under BC legislation. CPA, a chartered professional accountant, is a completely inappropriate professional designation to write this plan. A P.Geo is not a qualified person to write a Chemical and Materials storage plan. From a practical standpoint, neither of the designations have the training or experience to write this plan. In reality, the only qualified person I would recommend would be a professional chemist (P.Chem) with an adequate amount of lab management experience, at least 5 years. As it stands, neither of the authors are qualified persons.	Michelle Gillen's certifications had a typo and should have been stated as EP(CEA)[Environmental Professional Certified Environmental Auditor]. Although not a professional designation in BC, Michelle Gillen is certified by the Canadian Environmental Certification and Approvals Board and has 20 years of experience in auditing health and safety systems across Canada. Rolf Schmidt reviewed the Chemicals and Materials Storage Plan with the professional designation of P. Geo.	RT/TD to review	LDN/UFN	ERM		Rolf/Tonia?	RT	Ready for Submission	RT: June 28	Ready for Publishing
1701	Chemicals and Materials Storage Plan Section	Qualified persons	LDN/UFN		Jul 22, 2022	2	Follow up	Information Requirement	Yes	Unresolved: neither of these should be considered qualified persons. Legally, an EP(CEA) does not fit the requirement. Practically, the chemical knowledge is demonstratably lacking in this document. A professional geoscientist does not have the relevant experience or training in the field of chemistry. Additional obersvation: it essentially appears as though the authors while very good at looking up and citing relevant documentation, have no practical experience in chemistry. Request a memo to address this comment	The Chemicals and Materials Storage, Transfer and Handling Plan is not specific to a laboratory and instead is applicable to the Blackwater Project mine site where storage and handling will be completed both within facilities (e.g., Truck shop, explosives storage) and at mine site areas (e.g., airstrip). Thus practical (and extensive) experience in auditing of health and safety systems including mine sites across Canada is considered to be adequate. Chemicals to be used in the laboratory (and stored for laboratory use) for processing will be the purview of a qualified person (i.e., professional chemist) with experience. Additional laboratory specific hazard analyses and/or task specific standard operating procedures will be completed by a qualified persons (i.e., professional chemist) as needed. The CMSTHP is a higher level document. BW Gold appreciates the reviewer comment, however is of the view that a memo is not required to provide a response to this comment.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug 11	Ready for Publishing
1701	Chemicals and Materials Storage Plan Section	Qualified persons	LDN/UFN		Aug 31, 2022	3	Follow up		Yes	Unresolved: Michelle Gillen is not recognized as a qualified person under BC legislation. She legally is not a qualified person to write the chemical management plan. Rolf Schmidt does not meet the criteria of " being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof"	Please clarify where there is a legal requirement that a professional chemist be employed to prepare the chemicals and materials storage plan for a mine site. Both professionals in question have extensive experience in this area of expertise, are qualified professionals that report to an organization, are acting within their area of expertise, and are governed under their respective professions. Chemists are not currently governed under the Professional Governance Act.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	TD, Sept 14	Ready for Publishing
1701	Chemicals and Materials Storage Plan Section	Qualified persons	LDN/UFN (Neal)		Oct 06, 2022	4	Follow up		Yes	Chemists are listed as a QP in BC, the professional governance act is irrelevant here. There isn't a legal requirement to have chemists to prepare it, but there is a legal requirement to have a qualified person be a signing authority on the plan, and a professional chemist best meets the requirement in BC. Michelle Gillen is not recognized as a qualified person in British Columbia since her qualifications are not relevant to the subject matter and more improtantly not an accredited professional. BW Gold has so far failed to show how Rolf Schmidt meets the criteria as a relevant qualified person. Please show how Geoscience is releveant to chemical and materials storage. The language and chemical knowledge in the plan demonstrates a lack of understanding on the topic. It is irresponisble of BW Gold to knowingly employ persons without a professional designation or are acting outside of their designation to write this plan.	Can the reviewer please provide a reference in the Joint Application Information Requirements for Mines and Environmental Management Act Permits (JAIR) September 2019 where it lists that a P.Chem is required to sign-off the 9.16 Chemicals and Materials Storage, Transfer, and Handling Plan? The person who signed off the plan is an environmental scientist, Certified Environmental Audior (CEA) and has over 15 years' experience auditing environmental, health and safety compliance in mining, aerospace, automotive, chemical, food processing and pharmaceutical facilities. This is more than enough experience to develop and sign-off a chemical management plan for an open pit gold mine. If this remains an issue on the whole, BW Gold would like to review and discuss some of the credentials of the team members assigned to review its application and the lack of limitations put around their ability to provide comments outside of their fields of expertise.		LDN/UFN	ERM				Ready for Submission	18-Oct-22	Ready for Publishing
1701	Chemicals and Materials Storage Plan Section	Qualified persons	LDN/UFN (Neal)		Dec 01, 2022	5	Follow up		Yes	At the Nov 9th issues resolution meeting, BW Gold agreed to have a QP review and edit the Chemical and Materials Storage Plan. We will wait to review those updates before closing this comment.	BW Gold acknowledges LDN and UFN's request for a permit condition to have a QP review and edit the Chemical and Materials Storage Plan and will defer to EMLI and ENV on the inclusion of this request as a permit condition.		LDN/UFN	BWG					TD, Dec 19	Ready for Publishing
1702	Chemicals and Materials Storage Plan Section		LDN/UFN		Jun 11, 2022	1	New		No	I would strongly advise this entire document be re-written by a proper QP with the relevant experience. It is demonstratably lacking in several areas, specifically the chemical knowledge required. It appears as though some (but not all) of the corresponding legislation was consulted, but much of it missing. Consultation of the BC OHS section 30, in addition to sections 4 and 5, would have shown a better minimum standard of experience in the authors.	BW acknowledges the comment and will consult the BC OHS for practices to be incorporated into the next iteration of the Chemicals and Materials Storage, Transfer and Handling Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Tonia?	RT	Ready for Submission	RT: June 28	Ready for Publishing

1702	Chemicals and Materials Storage Plan Section		LDN/UFN		Jul 22, 2022	2	Follow up	Comment	No	unresolved. A QP needs to re-write this document. I would advise a P.Chem with releveant experience.	The Chemicals and Materials Storage, Transfer and Handling Plan (CMSTHP) will not be re-written. BW Gold will revise the plan to consult the BC OHS for practices to be incorporated into the next iteration of the plan and taking into account the suggested revisions by the reviewer comments #1669 to 1702. Further updates to the plan will be made based on annual evaluation and feedback. As stated in Section 15, all proposed revisions will be reviewed and discussed with the Blackwater Joint Occupational Health and Safety Committee prior to implementation. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	RT; Aug. 11	Ready for Publishing
1702	Chemicals and Materials Storage Plan Section		LDN/UFN		Aug 31, 2022	3	Follow up		No	partially resolved: authors don't meet the criteria as qualified persons to write this document	Please refer to response to comment #1702.		LDN/UFN	ERM		Tonia/Michelle		Ready for Submission	TD, Sept 14	Ready for Publishing
1703	Soil Management Plan Appendix 9-B Section 8.1		LDN/UFN (Terryn Kuzyk)		Jun 11, 2022	1	New		No	The required rec material volume is 10.73Mm3. Do the available volumes of each material type match the required volumes?	The reclamation materials balance is shown in Table 8.3-1. In general, there is a moderate surplus of mixed-mineral and organic surface soil, a substantial surplus of reclamation-suitable overburden, and a marginal deficit estimated for glaciofluvial surface soil. We believe the deficit will not occur in practice, due to conservatism in estimating available volumes, but if it does, it will be made up for by using the materials available in surplus.	No	LDN/UFN	IEG		Katie McMahen (IEG)	TD	Ready for Submission	RT; June 18	Ready for Publishing
1703	Soil Management Plan Appendix 9-B Section 8.1		LDN/UFN (Terryn Kuzyk)		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1704	Soil Management Plan Appendix 9-B Section 8.3		LDN/UFN (Terryn Kuzyk)		Jun 11, 2022	1	New		No	Is it appropriate to supplement glaciofluvial surface soil with overburden or mixed-parent-material surface soil, given the intended use in reclamation prescriptions?	Per response is 1703, we believe that the deficit will not occur in practice. If it does, though, yes, we believe it will be appropriate to supplement with other reclamation materials, as they have an equal or better capacity to store water for ecosystem use. If experienced, the deficit would affect 2-4 ha of reclamation, so it would have a very small effect, if any.	No	LDN/UFN	IEG		Katie McMahen (IEG)	TD	Ready for Submission	RT; June 18	Ready for Publishing
1704	Soil Management Plan Appendix 9-B Section 8.3		LDN/UFN (Terryn Kuzyk)		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for answering the question. Please add that detail to the updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1705	WWMP Section 2.3	Incident Identification	LDN/UFN		Aug 12, 2021	0			No	23n - "the means by which the Holder will, throughout all phases of the Project..." Please provide more detail as to how wildlife interactions and incidents will be reported and logged. Who is responsible for this work? Include a wildlife sighting form (or equivalent) or provide a reference to one for BW Gold workers. What information will be logged? Date, time, location, species, observer, behaviour, description of the interaction, outcome (e.g., mortality, injury), immediate response, relevant monitoring program, etc..? Copies of these to be included in the annual WMMP report in an appendix?	Text has been updated in "Section 2.3 Incident Identification" to include 1) who will be responsible for this work, 2) an overview of the data being recorded and 3) how it will be reported. The Environmental Manager, EM) will be in charge of recording and responding to wildlife interactions and incidents, while all personnel will be responsible for reporting incidental observations of wildlife, as well as interactions and incidents. The data being recorded will include the date, time, location, species, observer, behaviour, description of the interaction, outcome, immediate response, any updates to mitigation plans required, and any additional mitigation required. Reporting of interactions and incidents will be through the annual wildlife compliance report (The WMMP Report), where incidental observations will be summarized in a spatial format to identify if there are "hot spots" of observations, and what mitigation or management measures were enacted based on individual reports and the holistic data involving all yearly reports together. For instance, a fox may be observed on one day, which may not require any special mitigation, but multiple observations of the same fox in the same area	No	LDN/UFN	N/A			0			
1705	WMMP Section 4	Species-Specific Monitoring and Adaptive Management	LDN/UFN		Aug 12, 2021	0			No	Include summary of baseline information in each subsection (e.g., Amphibians, Bats, Caribou, etc..). Maps showing habitat suitability and baseline survey observations need to be included. This information is useful to the EM in coordinating surveys, salvages, and implementing mitigation measures. Please include "reschedule construction activities" under species-specific mitigation measures per P 23h.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	No	LDN/UFN	N/A			0			

1705	WMMP Section 4	Species-Specific Monitoring and Adaptive Management	LDN/UFN		Apr 11, 2022	1	New		No	Resolved. Follow up on maps to be included in 2021 Wildlife Baseline Report.	Comment acknowledged as resolved.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1705	WMMP Section 4	Species-Specific Monitoring and Adaptive Management	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	Yes	Please provide the maps to be included in the 2021 Wildilfe Baseline Report when available.	The Wildlife Mitigation and Monitoring Plan (WMMP; revised and submitted July 16, 2022 to regulator and Indigenous nation [including UFN and LDN] in response to comments) now provides the results of the 2021 baseline sampling. Descriptions of the 2021 monitoring programs and sampling locations are provided in the following sections of the July 2022 WMMP: 4.1.1 (Figure 4.1-2; amphibians), 4.2-1 (Figure 4.2-2; bats), 4.4.1 (Figure 4.4-4 and Figure 4.4-5; moose), 4.5.1 (Appendix D provides maps of survey locations; furbearers and grizzly bears), and 4.7.1 (birds) . The 2021 Wildlife Baseline Report has been produced and will be delivered to parties as soon as possible.		LDN/UFN	ERM		Greg		Ready for Submission	RT: Aug 11	Ready for Publishing
1706	WMMP Section 4	Species-Specific Monitoring and Adaptive Management	LDN/UFN		Aug 12, 2021	0			No	Having read through this section, I feel it would be far easier to understand and review the monitoring plans if they were presented in table format with each requirement (methods, locations, timing, duration, frequency) detailed in one of five boxes - just one column of five rows with a monitoring plan title (e.g., "Bird Mortality Monitoring (Tranmission Line)") This would make it easier for us to review for condition requirements and much easier for the EM and QEPs to understand and implement at the mine.	Throughout "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" followup monitoring programs have been presented in table format with Objectives, Performance Indicators, Triggers/Thresholds and Methods. These sections have also been added to the text for additional detail.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1706	WMMP Section 4	Species-Specific Monitoring and Adaptive Management	LDN/UFN		Apr 11, 2022	1	New		No	Could expand on these tables more and included locations, timing, duration, frequency as well to improve clarity for reviewers, EM, and QEPs.	The follow-up monitoring tables were included to provide an introduction to the follow-up monitoring section for each wildlife VC species. The detailed methods are then listed in the following sections, under Study Area/Sample Distribution, Data Collection - Methods, Analysis, and Reporting. BW Gold prefers to have these details listed in a single location, rather than repeating them in table and text - thus reducing the chance of editorial errors.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1707	WMMP Section 4.1	Amphibian - Overview	LDN/UFN		Aug 12, 2021	0			No	Requires general summary of baseline information including spatial habitat and baseline observation mapping.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1707	WMMP Section 4.1	Amphibian - Overview	LDN/UFN		Apr 11, 2022	1	New		No	Resolved, follow up on maps to be provided in 2021 Wildlife Baseline Report.	Comment acknowledged as resolved.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1707	WMMP Section 4.1	Amphibian - Overview	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	Yes	Please provide maps from 2021 Wildlife Baseline Report when they are available. There are numerous outstanding comments that rely on this 2021 report on data collected over a year ago! Naturally it is essential that this report is made available if BW is considering construction later this year otherwise the impacts of construction cannot be adequately assessed.	The 2021 Wildlife Baseline Report has been produced and will be delivered to parties as soon as possible.		LDN/UFN	ERM		Greg		Ready for Submission	RT: Aug 11	Ready for Publishing
1708	WMMP Section 4.1.1	Amphibian - Pre-Construction Surveys	LDN/UFN		Aug 12, 2021	0			No	"Sources of current breeding ponds will be identified using these baseline data and pre-construction surveys in the mine site and transmission line right of way (RoW)." Western toads migrate annually and baseline data is very dated and limited - all potential breeding habitat should be surveyed prior to construction activities during the April 1 to Sept 30 window to prevent incidental take.	Amphibian surveys were conducted in 2011, 2012 and 2017. Pre-construction surveys were also conducted for amphibians during the summer of 2021 and will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1708	WMMP Section 4.1.1	Amphibian - Pre-Construction Surveys	LDN/UFN			1	New		No	Resolved this will be updated with data from 2022 wetland surveys	Comment acknowledged as resolved.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1709	WMMP Section 4.1.2	Amphibians - Mitigation for Amphibians	LDN/UFN		Aug 12, 2021	0			No	Section should include BMPs outlined in Table 3.2-1 and industry-standard guideline documents (Section 2.2), including typical setback distances "as determined by the QEP". Other standard mitigations measures include: maintaining connectivity between breeding and overwintering habitat, and maintaining structures that are used to protect amphibians.	The majority of mitigation measures for amphibians are listed in Section 3. A text citation in Section 4.1.2 now directs the reader to Section 3.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1709	WMMP Section 4.1.2	Amphibians - Mitigation for Amphibians	LDN/UFN		Apr 11, 2022	1	New		No	No mention of maintaining connectivity, setback distances, protection structures, or other standard mitigation measures specific to amphibians in Section 3.	Setback buffers for toad breeding ponds are discussed in Section 4.1.2. Should toad breeding sites be identified adjacent to Project activities, the Adaptive Management Response in Section 4.1.3.2 is intended to reduce toads on active sites through installation of drift fencing and maintaining connectivity through installation of toad tunnels.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1710	WMMP Section 4.1.2	Amphibians - Mitigation for Amphibians	LDN/UFN		Aug 12, 2021	0			No	"Field surveys during the baseline program (2011-2013) identified several breeding ponds for western toad inside the planned Project footprint." The baseline report notes 4 toads found in lodgepole pine forest and the EAC application says 6 western toad obsevrations in the LSA. Maps showing these locations are important for management please add them.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1710	WMMP Section 4.1.2	Amphibians - Mitigation for Amphibians	LDN/UFN		Apr 14, 2022	1	New		No	Resolved. Follow up on maps to be included in 2021 Wildlife Baseline Report.	Comment acknowledged as resolved.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1711	WMMP Section 4.1.3	Amphibians - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"The amount of habitat lost will be evaluated each year by comparing the as-built Project footprint with the results of pre-construction surveys for breeding sites." May be beneficial for this document to distinguish more clearly between active breeding sites and breeding habitat as both seem to be mentioned interchangeably.	Text has been updated to refer to refer to breeding habitat - where toads may breed - and breeding ponds - where surveys confirm toads breeding.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1711	WMMP Section 4.1.3	Amphibians - Follow-up Program	LDN/UFN		Apr 14, 2022	1	New		No	Text not updated in Section 4.1.3.1.	BW Gold will make the suggested revision in a subsequent version of the plan to be specific to toad breeding sites identified through pre-construction surveys, or identified incidentally. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1712	WMMP Section 4.1.3	Amphibians - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Annual breeding surveys will be conducted in breeding ponds adjacent to the Project footprint (identified in pre-construction surveys)" Breeding ponds or breeding habitat? Important for continuity as EM may just survey "breeding ponds" identified in the baseline info accidentally. Need more detail in regard to timing. How far outside of the Project footprint will these surveys cover?	Follow-up surveys will be conducted in all habitats where breeding has been confirmed to monitor for continued breeding at these sites. This has been clarified in the text in Sedction 4.1.3.3.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A

1712	WMMP Section 4.1.3	Amphibians - Follow-up Program	LDN/UFN		Apr 14, 2022	1	New		No	Frequency of surveys is noted (annually) but not timing. Please provide detail on the timing of breeding pond surveys each year.	Baseline and Pre-construction surveys identified July at the best period to conduct surveys for toad breeding ponds, because the tadpoles are easily observed and identified. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1713	WMMP Section 4.2.1	Bats - Pre-Construction Surveys	LDN/UFN		Aug 12, 2021	0			No	The mine site (and a buffer surrounding the mine site). - Please specify buffers (see below)	Section 4.2.2 (Mitigation for Bats) indicates that buffers will be established around any active hibernacula and active roots following a risk-based approach in consultation with Indigenous groups and relevant authorities that considers the species present, the wildlife feature, it's location and the risk of disturbing the feature with the type of activity being considered. For instance, larger buffers may be used for noisy activities, but other activities may have smaller buffers.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1713	WMMP Section 4.2.1	Bats - Pre-Construction Surveys	LDN/UFN		Apr 14, 2022	1	New		No	Resolved, although could be beneficial to provide a minimum buffer that will be used.	Comment acknowledged as resolved.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1714	WMMP Section 4.2.2	Bats - Mitigation for Bats	LDN/UFN		Aug 12, 2021	0			No	Buffer guidelines from Compendium, Bats (Section 2.4.1): "5.2.1. Avoid removal of rock or talus within a minimum 300 m of valuable bat habitat (e.g. colonial maternity or hibernation sites). 5.2.2. Avoid removal of vegetation within a minimum additional 200 m management zone. 5.2.3. Do not conduct blasting within 300 m of valuable bat habitat features. 5.2.4. Follow risk timing windows when working within 300 m of valuable bat habitat features." Also, "3.4. Follow risk timing windows when planning and conducting development activities in or near colonial sites (communal roosting, nursing or hibernaculum sites). 3.4.1. Note that buffer distances should be activity-dependent (e.g. blasting disturbance versus clearing activities): Blasting within 1000 m of important features should ensure sound concussion is less than 150 decibels, that the shock wave is less than 1.5 p.s.i. and the peak particle velocity is less than 15 mm/second. No blasting should occur within 300 m of valuable bat habitat features." Large buffers means large survey areas.	Section 4.2.2 (Mitigation for Bats) indicates that buffers will be established around any active hibernacula and active roots following a risk-based approach in consultation with Indigenous groups and relevant authorities that considers the species present, the wildlife feature, it's location and the risk of disturbing the feature with the type of activity being considered. For instance, larger buffers may be used for noisy activities, but other activities may have smaller buffers.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1714	WMMP Section 4.2.2	Bats - Mitigation for Bats	LDN/UFN		Apr 14, 2022	1	New		No	See above comment, could be beneficial to provide at least a minimum buffer that will be used.	Comment acknowledged as resolved.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1715	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Where an active hibernacula or roost was identified during pre-construction or pre-clearing surveys, and a buffer zone established around this feature, continued use of this buffer area will be monitored for bats during construction and operations every 2 years. We assume this would use ARUs please specifiy and provide a basic sampling strategy and how you will estimate deployment time to ensure coverage.	Additional detail on methods for monitoring has been provided in Section 4.2.3.1.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1715	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	Reference specific section in which survey methods can be found in RIC 1998a.	BW Gold questions whether there is a specific question or comment on the proposed methods to use ARUs to monitor the buffer zone surrounding the mine?	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1716	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Annual surveys of bad presence will be conducted using Autonomous Recording Units (ARUs) to detect relative bat activity (RIC 1998)." Typo. Please write the name of the RISC methodology in-text for clarity. Monitoring program must include sampling strategy or design and location (if avaialble), frequency, timing.	Locations will be determined following assessment of 2021 field results. The study area is defined in Section 4.2.3 and the RIC methodology supports the deployment of ARUs at locations within the study area likely to yield bat activity. These will include ARU deployment near bat boxes as specified in Section 4.2.3	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1716	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	Resolved - follow up on 2021 field results for determined sample locations.	Comment acknowledged as resolved.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1716	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Please provide 2021 field results for determined sample locations when available.	BW Gold has provided the report to the LDN.UFN.		LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: Aug 11	Ready for Publishing
1717	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Where roosts were lost in the mine footprint and roosting structures were installed as an offset, these structures will be monitored." The condition (8.15) states the "loss of roosting habitat", not the loss of established roosts. The amount of habitat to be compensated should be determined and boxes are to be installed prior to construction. What type of roosting structures (or what are the options)?	BW Gold plans to install bat boxes to offset for any active roosting trees that will be removed through ground clearing. Since clearing will be progressive, as construction continues, the plan is to put out bat boxes in each year of construction.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1717	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	No longer using bat boxes - previous comment still applies for other roost structures (e.g. brandenbark) - "The condition (8.15) states the "loss of roosting habitat", not the loss of established roosts. The amount of habitat to be compensated should be determined and **roost structures** are to be installed prior to construction"	Advice received from ECCC on February 2022 indicate that loss of roosting habitat will be offset through augmenting habitat that may support bats. The WMMP includes references to augmenting wetland habitat by removing roads as part of the caribou offsetting and offsetting lost wetlands through wetlands offsetting. In their letter on February 2022, ECCC indicated that they did not advocate installing bat boxes as part of a study on bat roost use. In a follow-up communication in May 2022, ECCC indicated that they preferred to install Brandenbark for this study and to meet the federal condition to install "roosting structures". A study on roosting characteristics is described in the WMMP as being initiated in 2023. Following discussions with ECCC in May 2022, "roosting structures" will be installed prior to construction, and the bat roosting study initiated in 2022. BW Gold will update the WMMP to include additional information on offsetting via wetland augmentation and installation of brandenbark to install "roost structures" and study roost choice by bats. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing

1717	WMMP Section 4.2.3	Bats - Follow-up Program	LDN/UFN		Apr 18, 2022	2	Follow Up	Clarification	No	Clarification needed on "the amount of habitat to be compensated should be determined ... prior to construction"	The updated WMMP Plan includes a longer description on the offsetting program for bats in Section 4.2.3. In summary, offsetting for bats is being conducted in two parts - offsetting for lost roosting habitat and installing roosting structures. Roosting structures are being installed prior to construction, per the condition 8.15. These roosting structures, as well as additional roosting structures being installed after the beginning of construction (fall 2022) are part of a BW Gold - ECCC study on the use of Brandenbark and bat use. As discussed in the previous response, ECCC advised BW Gold that bat boxes were not supported by government biologists, and requested Brandenbark be installed instead. Bat habitat is also being offset though augmenting wetland habitat. This offset is a longer-term program which will occur through the Wetland Management and Offsetting Plan (WMOP) to offset lost wetland habitat in the mine site prior to construction as noted in the condition. Wetland and bat habitat will also be augmented through the Caribou Mitigation and Monitoring Plan (CMMP) through the removal of roads as part of the caribou offset. Removing these roads will augment and improve local-level hydrology flow and wetland communities. This wetland offsetting through the CMMP was proposed by ELNOPD as discussed in the WMMP.		LDN/UFN	ERM		Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
1718	WMMP Section 4.2.4	Bats - Adaptive Management for Bats	LDN/UFN		Aug 12, 2021	0			No	Table 4.2-1: Similar concerns as for amphibians (Table 4.1-1). Lack of detail in regard to monitoring methodology and data quantification of impacts. How much "less" bat activity? How will bat activity be differentiated with respect to threshold distances? Please add quantities thast are measurable (e.g. sites with reduced utilisation) sites where bat activity has ceased (number of sites and other details are ways in which you can quantify loss or gain of bat activity.	The primary monitoring metric will be a reduction in the number of species at a particular site and a reduction in the number of sites with bats. It is not possible to determine the population (number) of bats at a particular location using ARUs, since the recording units cannot count individuals. The trigger has been updated to a "measurable change in diversity or distribution over time". The natural variability of bat distribution at the site will be determined from control areas outside of the Project footprint.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1718	WMMP Section 4.2.4	Bats - Adaptive Management for Bats	LDN/UFN		Apr 18, 2022	1	New		No	"How will bat activity be differentiated with respect to threshold distances?" Although population cannot be determined at a particular location, number of sites occupied by bats over time can be, so may be worth including measurable values for this as part of the threshold.	The WMMP Section 4.2.3.1 Buffer Zone Monitoring indicates that data will be presented as relative bat activity and species diversity by site and area. This includes whether the site was occupied by bats, and so the number of sites occupied by bats would be presented in the data. BW Gold will update the WMMP to specify the number of sites with bats, as well as relative bat activity in future versions of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1719	WMMP Section 4.4	Moose - Overview	LDN/UFN		Aug 12, 2021	0			No	Please add a brief summary of baseline information, including baseline hab and observation mapping in an appendix.	Baseline summary for moose is now included in Section 4.4.3	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1719	WMMP Section 4.4	Moose - Overview	LDN/UFN		Apr 18, 2022	1	New		No	Resolved - follow up on detailed baseline results to be available in 2022 report.	This comment is acknowledged.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1719	WMMP Section 4.4	Moose - Overview	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	Yes	Please provide 2021 wildlife baseline results when available. As above many comments hinge on this report	The 2021 Wildlife Baseline Report has been produced and was distributed to agencies on August 4, 2022.		LDN/UFN	ERM		Greg		Ready for Submission	RT; Aug. 14	Ready for Publishing
1720	WMMP Section 4.6.2 TABLE	Grizzly - Mitigation for Grizzly	LDN/UFN		Aug 12, 2021	0			No	Propose to replace "...high-elevation slopes during the critical period." with "alpine, subalpine, or montane environments" or similar as it is more descriptive and related to the sites location. Alternatively, provide more detail with respect to the Project worksite.	The Text in Section 4.6.2 (Mitigation for Grizzly Bear) has been updated to include the proposed text "alpine, subalpine, or montane environments".	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1720	WMMP Section 4.6.2 TABLE	Grizzly - Mitigation for Grizzly	LDN/UFN		Apr 18, 2022	1	New		No	Text not updated in Table 4.6-1.	The text is updated in Section 4.6.2, in the first paragraph following Table 4.6-1.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1721	WMMP Section 4.6.1	Grizzly - Pre-Construction Surveys	LDN/UFN		Aug 12, 2021	0			No	Typo: "Denning habitat will be identified via HSM (P 23.D) and confirmed" Please choose either "23.H" or "23h" format and edit references throughout the document accordingly.	The text has been updated to "23.H" format throughout.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1721	WMMP Section 4.6.1	Grizzly - Pre-Construction Surveys	LDN/UFN		Apr 18, 2022	1	New		No	There are still inconsistencies with this formatting.	BW Gold will correct formatting of references to conditions in the next version of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1722	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Aug 12, 2021	0			No	"Walking transects in open environments (e.g., around wetlands or waterbodies);" Requires more detail. Distance between surveyors, time of day, appropriate weather conditions? Please include mention of low-intensity ground sweeps.	Text has been updated in Section 4.7.2 to discuss pre-clearing surveys in greater depth.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1722	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Apr 18, 2022	1	New		No	There still isn't detail on "distance between surveyors, time of day, appropriate weather conditions".	Further detail on pre-clearing surveys for birds is available, as stated in WMMP Section 4.7.2 in the Bird Pre-Clearing SOP.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1723	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Aug 12, 2021	0			No	"Reporting in the WMMP Report will include the outcome of the nest and the buffer distance that was" Also to include spatial data and QEP rationale if industry standard setback distances were not applied per 23c.iii. Also to include "...detailed records of efforts undertaken to avoid incidental bird takes..." in the WMMP report (e.g., spatial data, such as survey tracks, database of observations incl. species and nest status, and associated reporting).	Additional text from the provincial condition has been added into 4.7.2 to address this issue.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1723	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Apr 18, 2022	1	New		No	No mention of "detailed records of efforts undertaken to avoid incidental bird takes (e.g. survey tracks, etc...)"	The reviewer is incorrect. The WMMP Section 4.7.2 under Reporting indicates that a map of the construction area in the survey year with locations of conducted surveys will be provided, as well as identified mitigation and adaptive management taken to avoid incidental take.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1724	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Aug 12, 2021	0			No	"Buffers will be clearly marked with flagging tape, actual nests will not be marked;" What color/pattern of flagging tape? Document should include ribbon scheme or reference one in the CEMP. This is important to distinguish birds, dens, etc.. from riparian management zones, for instance.	This will be determined at the time, to ensure a unique colour/pattern is used.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1724	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Apr 18, 2022	1	New		No	Should be decided on ahead of time to ensure consistency through construction and operations.	The WMMP Section 4.7.2 indicates that "Buffers will be clearly marked with flagging tape, actual nests will not be marked." The specific color of flagging tape to be used is a detail that is not required for a wildlife management plan, and is the responsibility of the EM to ensure that specific markings are clear to those working in the field.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1725	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Aug 12, 2021	0			No	"Nests may be monitored as frequently as weekly to determine whether the nest is still active." Should include more detail in regard to active nest monitoring (higher frequency or throughout potentially disturbing work activities) to ensure the nest is in compliance and that the birds are not disturbed. Please add that nests will be monitored from a distance with spotting scope otherwise you risk disturbing the nest.	Included text to use spotting scope and stay back from the nest. Did not give any other additional details. Frequency will be determined by QP.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A

1725	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Apr 18, 2022	1	New		No	Please add that frequency will be determined by a QP - right now it still states weekly monitoring.	The WMMP Section 4.7.2 does not indicate weekly monitoring; it indicates: "Surveys will be completed during the bird breeding season and as near as possible to the planned start of clearing and construction, typically within one week of planned clearing." BW Gold will update the WMMP to include that design of the pre-clearing surveys will be determined by a QP, including the timing of surveys.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1725	WMMP Section 4.7.2	Birds - Mitigation Measures for Birds	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Text detailing use of spotting scope and staying back from the nest is not found. Please ensure these updates (along with "design of pre-clearing surveys will be determined by a QP") are captured in the next update to the WMMP.	BW Gold will update the next version of the WMMP to include that design of the pre-clearing surveys will be determined by a QP, including the timing of surveys. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
1726	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Before sampling will occur prior to substantial construction and for the duration of the construction period." Require a more specific timeline. What is "substantial construction"? Baseline must be established prior to disturbance - certain bird species are easily disturbed and surveys must take place at particular times of year.	Addressed in text, Section 4.7.3.2 "sampling will begin prior to substantial construction to collect additional baseline information before the Project has completed construction.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1726	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	"Substantial construction" is still not defined in text.	"Before" sampling for birds is being conducted in 2022 and 2023 in areas that will eventually (year 5-10) be at the edge of the mine, but in 2022 and 2023 are >2 km from early works or construction activities, and so can be used as "Before" sampling locations in a BACI design. This is the same design that is being used for moose, toad and waterbird monitoring.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1727	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Surveys for water birds will include ground-based counts of water birds at wetlands, streams and ponds both close to Project and at a greater distance." Please include a distance in meters.	The text in Section 4.7.3 has been updated to describe the locations of test and control plots for birds monitoring.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1727	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	Text still reads: "A goal of 30 survey sites, one third within 200 m the Project as impact sites and the remaining point counts at greater distance as control sites…"	The WMMP, Section 4.7.3.2, Data Collection - Survey methods indicates: "Control sites will be located between 200 m and 2,000 m from the Project footprint."	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1728	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"Monitoring program conducted for the first three years after construction of the line, at which point need for the program will be reassessed;" Reassessed based on what criteria? This is a monitoring plan and required specific adpative management triggers per P 3.	Removed text that it will be reassessed.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1728	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	Why will monitoring only occur for the first three years?	During the review of the environmental assessment, BW Gold committed to conducting a monitoring program to assess bird mortality for the transmission line. The WMMP Section 4.7.3.6 Transmission Line Monitoring indicates that a study will be conducted for the first three years of operations of the transmission line. This study will address the commitment to monitor for whether there is an effect of the transmission line on birds and allow for adaptive management if there is an effect. If there is no effect on birds, then there is no point in continuing a costly monitoring program.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1729	WMMP Section 4.7.2	Birds - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"The EA predicted the transmission line may pose a mortality risk for birds due to line-strikes. Mitigation measures to minimize the risk to birds are discussed in Section 3.4." there is one mitigation measure there. Providing additional bird-specific measures in this section, even ones to be triggered by adaptive management from your APLIC reference, would be ideal and show foresight with respect to the program. Without listing adaptive management measures, us reviewers have no idea what is meant by "take additional action" or similar and are required to ask for more information.	Added text to Section 4.7.5, to include potential adaptive management measures for birds if mortality for birds is discovered due to the transmission line.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1729	WMMP Section 4.7.2	Birds - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	Still only one mitigation measure specific to birds in section 3.4, even though 4.7.2 states "Mitigation measures to minimize the risk to birds are discussed in Section 3.4.	Standard mitigation and adaptive management measures to address potential line-strikes by birds on transmission lines is discussed in Section 3.4 and Section 4.7.3.6. Section 3.4 includes mitigation measures: "Deployment of markers on the shield wires of transmission lines and phase conductors of distribution lines, to improve visibility of the lines for birds (MT 9-32, 14-18);". Section 4.7.3.6, Transmission Line Monitoring; Adaptive Management Response - includes a variety of adaptive management responses, including: "Investigation into the extent of problems, to better understand what mitigations are needed and where, such as increasing the number of monitoring sites or frequency of monitoring sites; Installing new or additional line markers in identified high-risk areas of the transmission line; Installing additional guards on transmission towers; and Assessing mitigations that may be appropriate, depending on species and transmission line specifics, as described in Reducing Avian Collisions with Powerlines (APLIC 2012)."	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1730	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	Instead of providing a table of adaptive management specs, we feel it would be beneficial to keep everything organized per monitoring plan / species. This includes monitoring plan overview and details (perhaps in a 1 column, 5 row table as mentioned in a Section 4 comment), plus the management plan triggers and additional measures (perhaps in a 6th row. It is important that all relevant information is organized concisely within species-specific sections so that the protocols can be followed and adapted by the EM.	Tables have been inserted for each species or species group as suggested.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1730	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	There are no tables included in section 4.7.3.	Section 4.7.3 includes Table 4.7-3 Follow-up Monitoring for Birds.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1731	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Aug 12, 2021	0			No	"• Between 10 and 100 records. The medium and high thresholds should be lowered to 15 and 20, respectively as these threshhold are potentially dangerous to the bird species in question. It is important to keep birds off this potentially harmful pond.	The triggers for adaptive management have been updated throughout Section 4 so that they are species or group-specific, rather than based on being statistically detectable.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1731	WMMP Section 4.7.3	Birds - Follow-up Program	LDN/UFN		Apr 18, 2022	1	New		No	Triggers and thresholds are said to be determined based on the power to detect change after the first two years of data collection. What triggers will be used during in the meantime to prevent harm to birds?	Mitigation measures described in Section 3.4 will be used throughout the life of the project to manage potential effects on birds. Surveys and triggers for mitigation during construction of the project, including the first two years of the Project, are discussed in Section 4.7.2, Mitigation for Birds. The WMMP Section 4.7.3 describes the long-term monitoring programs for birds that are intended to track potential effects on bird populations and trigger adaptive management if potential effects are recognized. Changes in bird populations over time can only be measured "through time", and so a minimum of 2 years of data are required to assess whether bird populations near the mine are reacting differently than bird populations at greater distances.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1732	WMMP Section 5	Documentation and Reporting	LDN/UFN		Aug 12, 2021	0			No	Management on the Project site and its surroundings needs to be spatial this is essential to allow the EM to make informed decisions. Using simple GIS methods will promote good project management, visualisation and communication through maps of the wildlife managagement actions, sightings and information to staff, stakeholders and government. Using a GIS database to collect and map data is the best way to understand wildlife associations with mining infrastructure and increase the EM capacity to solve wildlife issues efficiently. Please summerise your spatial data managament strategy here, including data recording, data management, and use of GIS software, a simple free GIS software such as QGIS or others are suitable and please mention that GPS's are being used for all data collection.	BW Gold will implement and maintain a spatial wildlife database to promote good project management, visualization and communication through maps of the wildlife management actions, sightings and information to staff, stakeholders and government. Demos of available software solutions that include spatial analysis tools have taken place and BW Gold in the process of selecting a final vendor. Monitoring data and surveys, where possible, will be migrated into the database as well as incidental wildlife sightings by the workforce (to the extent possible). Maps will be generated from the database to support existing annual reporting requirements (e.g. provincial ARR, federal follow-up reporting) and at the request of stakeholders, where reasonable requests are made.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A

1732	WMMP Section 5	Documentation and Reporting	LDN/UFN		Apr 18, 2022	1	New		No	Mention of spatial database use could still be elaborated on in this section - no mention of GPS's used for data collection.	BW Gold disagrees that it must be specific about recording locations with GPS. The WMMP Section 5 has committed to maintain a spatial database of incidental wildlife observations and wildlife incidents to inform adaptive management. While recording location with GPS may be the most convenient in terms of the database, not all employees carry a GPS, and BW Gold must be open to recording other ways of reporting spatial data, such as: 1) Kluskus FSR KM 135+350, 2) Building A, West Door, 3) Window in room 135, or 4) Sump D. All of these forms of spatial data are specific to a location and can later be converted to lat/long coordinates in the spatial database.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1733	WMMP Section 5.1.1	Incident Response Records	LDN/UFN		Aug 12, 2021	0			No	More detail needed on how the Proponent will "tabulate and submit the information regarding wildlife observations, wildlife mortalities observed, and significant interactions to ENV, FLNRORD and Aboriginal Groups on an annual basis" and "report on identified risks to wildlife and/or people learned from such monitoring and how such risks will be addressed". Please also mention your use of spatially referenced data.	The text in Section 5.1.1 has been updated.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1733	WMMP Section 5.1.1	Incident Response Records	LDN/UFN		Apr 18, 2022	1	New		No	"tabulate and submit the information regarding wildlife observations, wildlife mortalities observed, and significant interactions to ENV, FLNRORD and Aboriginal Groups on an annual basis" and "report on identified risks to wildlife and/or people learned from such monitoring and how such risks will be addressed" **Not addressed in section 5.1.1 as noted.**	Spatially-referenced data is already discussed in Section 5.1.1, where it states: "Spatial data will be recorded, stored and reported for wildlife incidental and incident reports."	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1734	WMMP 4.7	Compliance	LDN/UFN		Jan 28, 2022	0			No	8.16: "The Proponent shall, prior to construction and in consultation with Indigenous groups and relevant authorities, conduct pre-construction surveys to identify short-eared owl (Asio flammeus) moderate to high-value nesting and foraging habitat, and shall implement measures to mitigate the loss of short-eared owl (Asio flammeus) habitat caused by the Designated Project. " No mention of surveys, habitat, or mitigation measures for short-eared owl"	Evaluation of habitat and surveys for short-eared owl (SEOW) were conducted during baseline surveys in 2021. The WMMP has been updated to describe these data in WMMP, Section 4.7.1.	No	LDN/UFN	ERM		Greg	RT	N/A		N/A
1734	WMMP 4.7		LDN/UFN		Apr 18, 2022	1	New		No	What about mitigation measures for short-eared owl?	Short-eared owl habitat was assessed at 116 sites in the mine site and transmission line, and no sites were rated above a Low quality. In addition, surveys were performed for short-eared owl in 2017, which reported no observations of short-eared owl. Mitigation planned for all bird species, including timing clearing to avoid the breeding period, conducting pre-clearing surveys and buffering any observed nests will also protect short-eared owl.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1735	WMMP 4.4.1 & 4.6.1		LDN/UFN		Apr 18, 2022	1	New		No	"Aerial imaging was flown in August - October 2021, however data collection was disrupted due to extensive **wildlife** smoke" Typo.	This typo will be corrected in the next version of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1736	WMMP 3.1		LDN/UFN		Apr 18, 2022	1	New		No	"If bears or furbearers have been observed in camp or in buildings, deter these animals (Section 3.11). **Section 3.11 does not exist.** Section 3.10 details "camp hardening" but not deterrence methods specifically.	The citation should refer to Section 3.10 Deterrence of Wildlife. This typo will be corrected in the next version of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1737	WMMP Table 3.3-1		LDN/UFN		Apr 18, 2022	1	New		No	"Observations of caribou on the mine site during construction may result in a work stoppage until the caribou moves off" Should be **will result** in a work stoppage**.**	BW Gold disagrees. The circumstances under which work stops is discussed in the CMMP and is based a risk-based approach that considers the time of year, project phase (construction vs. operations), the type of activity and distance buffers to caribou. More detail is available in the Work Stoppage protocol listed in Section 3.2 of the CMMP.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1738	WMMP 3.3.2		LDN/UFN		Apr 18, 2022	1	New		No	"For wetlands adjacent to work areas which will be maintained, implement a 30 m vegetation buffer" How will these be demarcated to ensure work does not occur within buffer area?	The WMMP Section 3.3.2 Habitat Loss and Alteration Management, includes mitigation for loss and degradation of adjacent wetlands. This section includes the mitigation bullet: "Designating well demarcated no-work zones and management work zones with specific restrictions, e.g., no heavy machinery." The WMMP has committed to demarcating these areas. The specific methods used in the field - whether they are flagged or roped-off, will depend on the specific location and circumstances and is the responsibility of the EM. This level of detail is beyond the requirements of a WMMP.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1739	WMMP 3.10.2		LDN/UFN		Apr 18, 2022	1	New		No	What is meant by adverse conditioning (AVCD)? Please provide more detail or examples for clarity.	The WMMP Section 3.10.2 Response and Deterring Habituated Bears provides a graduated approach to deterring habituated bears that focuses on managing personnel to reduce the risk of attracting bears, and minimizing direct interactions with bears. Adverse Condition (AVDC) bears is typically conducted by moving them away with a vehicle, bear bangers, drones or can be elevated to rubber bullets. As described in the WMMP, deterring is at the discression of the EM, who will communicate with the UFN/LDN prior to action if time allows. Examples of AVCD will be added to the next iteration of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1740	WMMP 4.1.3.3		LDN/UFN		Apr 18, 2022	1	New		No	"Surveys will be conducted at known breeding ponds within 500 m of the Project footprint during construction, operations, and closure" What is the timing of these surveys?	Standard methods for surveying breeding ponds at this location in BC include surveying in July for tadpoles. Survey timing will be added to the next iteration of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1741	WMMP 4.1.3.4		LDN/UFN		Apr 18, 2022	1	New		No	What is the frequency/timing of visual surveys/facility waterbody monitoring for toads?	Section 4.1.3.4 Facility Waterbody Monitoring for Toads provides the frequency and timing of surveys: "Surveys of facility waterbodies will occur annually during construction, operations, and closure."	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1742	WMMP 4.6.3.4		LDN/UFN		Apr 18, 2022	1	New		No	Confirm that checking cameras once per year will be sufficient to ensure memory cards are not full/batteries empty before that time.	ERM currently operates ~1,000 trail cameras in various programs in BC and the Canadian Arctic and can confirm that with appropriate batteries, camera programming and memory cards, yearly camera checks is sufficient. Checks are typically timed to coincide with the beginning of the active season, e.g., spring, so that if any cameras fail, they do so when animals are inactive (winter).	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1743	WMMP 4.7.2.1		LDN/UFN		Apr 18, 2022	1	New		No	"pre-clearing surveys are conducted in the closest window possible prior to vegetation clearing during sensitive periods (typically within one week)" One week should be the maximum time - during critical periods should be closer to three days.	The timing of surveys will be updated in the Pre-clearing Bird SOP and the next iteration of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing

1744	WMMP Table 4.7-3		LDN/UFN		Apr 19, 2022	1	New		No	Row 2. & 4.: What triggers/thresholds will be used in the meantime until two years of data are collected? Row 7. - What is meant by "less frequently than normal"? This is hard to quantify.	For a response to mitigation triggers during the first two years, please see the response to Comment 1731. Section 4.7.3.10 Nest Success Surveys, Triggers and Thresholds states: "Triggers or Thresholds Nesting success can vary widely depending on the weather, food availability, predators, and other factors. Therefore, it should not be assumed that nesting success within buffered areas will be 100%. The success of bird nests is a trend of bird nests in the buffer zones fledging less frequently than average. Average nest success will be determined based on published research for species or species groups and will be included in reporting numbers."	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1745	WMMP 4.7.3.3		LDN/UFN		Apr 20, 2022	1	New		No	Time of day for surveying is missing for common nighthawk.	The WMMP Section 4.7.3.3 Common Nighthawk Monitoring uses Autonomous Recording Units (ARUs) to record the calls of the common nighthawk, following the methods in Canadian Nightjar Survey Protocol (WildResearch, Bird Studies Canada, and ECCC 2018). The protocol has ARUs left in the field continuously and recording when birds may be active at dusk.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1746	WMMP page 4-3		LDN/UFN		Apr 21, 2022	1	New		No	Aerial surveys completed in July 2017 assessed an additional nine wetlands for western toad suitability. These wetlands had poor suitability for western toad breeding and were therefore not included in ground surveys. Please add the evidence used to determine if these wetlands did or did not contain breeding habitat as these types of surveys would not usually happen via the air.	It is standard practice to rate the habitat suitability of ponds as breeding locations prior to stratifying and conducting ground surveys of ponds. Habitat suitability can be rated from the air or the ground, based on variables such as water flow, canopy closure and the type of pond. Additional information on surveys conducted in 2017 is included in the 2021 Pre-construction Wildlife Report. Note that surveys in 2021 and planned for 2022 will replace any previous survey results and guide pre-clearing surveys and amphibian salvage during construction of the project.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1747	WMMP Figure 4.1-1	Hibernacula	LDN/UFN		Apr 21, 2022	1	New		No	The map suggests that most detections were along roads, suggesting that road surveys were the primary survey method., While road surveys are important and you use these later to understand potential crossing points and mortality, future surveys should also focus on water bodies to determine the distribution of this species across the study area and particularly in the mine site, this data will allow more adaptive management to prevent accidental take of toads.	Surveys for toad breeding sites, which will guide pre-clearing surveys and amphibian salvage during construction of the project, are conducted at ponds. See Section 4.1.3.3 Monitoring Toad Breeding Ponds. Toad breeding sites cannot be determined from road surveys.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1748	WMMP Section 4.2	Moose distribution Monitoring	LDN/UFN		Apr 21, 2022	1	New		No	There are records of bats using rock crevices as hibernacula in Canadian habitats experiencing temperatures below -35 degrees. It is very possible that deep rock crevices occur in the study area that could provide hibernation habitats. As mentioned by ECCC the project should be open to bats using other structures as hibernacula in the study area, hibernation of bats in the mine site and buffer certainly cannot be discounted.	As stated in Section 4.2.1, Pre-Construction Surveys (2021), searches were conducted for bat hibernacula at exposed rock features, including both cave and crevice-type hibernacula. These data are reported in the updated WMMP and the 2021 Pre-Construction Wildlife Report.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT; June 17	Ready for Publishing
1749	WMMP Page 4.4.3.3	Bear assessment of numerical changes at Kokanee spawning sites	LDN/UFN		Apr 21, 2022	1	New		No	The moose distribution monitoring is looking at a numerical response of moose to the mine and the mine buffer. This section requires an explanation of the monitoring design and statistics otherwise it is impossible to assess. I think snow tracking and sign survey sections have already been written in the CMMP, please copy these over and integrate into the WMMP.	Note that Section 4.4.3.3, Moose Distribution Monitoring already refers the reader to the CMMP, where the combined moose and caribou distribution monitoring program is described. An overview of the moose/caribou pellet count and snowtrack surveys will be incorporated into a future iteration of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1750	WMMP page 4-48	transmission line monitoring	LDN/UFN		Apr 21, 2022	1	New		No	In your analyses you do not mention any statistical design. For this type of Grizzly assessment explanation of statistics are necessary as you are looking for numerical changes, please add some statistical design such as minimum samples sizes and anticipated tests to be carried out on the camera trap data (e.g. a paired t-test on cameras)	The Analysis section indicates that "The level of bear activity (i.e.., number of identifiable individuals and number of triggers per site) will be compared through time." Additional description of statistical methods will be added to a future iteration of the WMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1751	WMMP page 4-73	transmission line monitoring	LDN/UFN		Apr 21, 2022	1	New		No	The transmission line monitoring is different from other monitoring as you already have determined the threshold levels for mortalities in numbers (i.e.. 5 bird mortalities). To allow this to be put into context some indication of the sample effort (number of km of the line sampled) is needed. Basically the more line you sample the greater chance there is that you will find bird mortalities, so this is an important part of the design that will allow assessment. Some indication of how you will size up results (from the area sampled to the entire line) is also needed based on the sample effort as if you only sample areas of higher risk then how will you assess risk in lower risk areas. Etc.	Scientific research indicates that bird strikes on transmission lines are highly clustered in space, typically occurring at high-risk areas, such as at the ends of large lakes or wetlands, in foggy valleys, etc... The monitoring plan therefore focuses monitoring effort in these higher likelihood areas. These areas are being identified in the field during 2022 and will be updated in a future iterations of the WMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1752	WMMP page 4-73	Nest success analyses	LDN/UFN		Apr 21, 2022	1	New		No	Triggers and thresholds should not only include waterbirds. While waterbirds are at much more at risk than other birds, other raptor and passerine species are also killed by striking powerlines and should be included within your impact thresholds. As with everything on this project you need the monitoring strategy to be open to identifying new threats that were unexpected, this precautionary approach is needed for transmission line monitoring.	Triggers for raptors and upland birds (non-waterbirds) will be added to a future iteration of the WMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1753	WMMP Page 4-78	Appendix D	LDN/UFN		Apr 21, 2022	1	New		No	You have species richness and abundance as nest success indicators. Please correct this as richness and abundance have nothing to do with nest success. Success should be analysed and presented using chick mortality across the monitoring period and something indicating a survival score and compared with natural expected survival.	In Section 4.7.3.10 of the Nest Success Surveys, the section on analysis will be updated to indicate that chick survival and fledging will be used as monitoring variables in a future iteration of the WMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1753	WMMP PAge 4-78	Appendix D	LDN/UFN		Aug 28, 2022	3	Follow up		No	Please ensure this comment is carried forward and included in the next updated version, Additionally, please ensure that nest success is monitored using chick survival and fledgling success even if the changes have not yet been made in text.	Yes - Nest success is monitored according to whether the nest fledges (not necessarily a count of the number of chicks), and the area would not be cleared until fledglings have left the vicinity. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Greg		Ready for Submission	RT; sept 15	Ready for Publishing
1754	WMMP 3.1.2.1	BATS ECCC Recommendations	LDN/UFN		Apr 21, 2022	1	New		No	Assessing habitat suitability ratings with field assessments will only get you so far in terms of assessing actual habitat quality and how bears actually use and interact with the habitats. Using sign and sighting location data (collected using various wildlife surveys) to validate the model should be feasible. As you gain enough Grizzly use / location data, this should become your primary means of assessing / validating the suitability ratings you have assigned across your study area, otherwise the suitability ratings you have will continue to be a very subjective assessment of habitat without data and inference to improve the suitability ratings.	Condition 23D states: "the means by which information from the habitat suitability mapping for the Project Site will be confirmed or updated for the use of the Project Site by grizzly bears and moose prior to Construction at the Project Site, and in consultation with Aboriginal Groups." To address this condition, Habitat Suitability field plots were conducted during the summer of 2021 following standard Resource Inventory Standards Committee (RISC) methods. These field plots were compared against existing Habitat Suitability Mapping, as described in Appendix D of the WMMP, Blackwater Grizzly Bear and Moose Habitat Suitability Modelling Assessment Report. This section of Condition 23 has now been met and no further evaluation of the habitat suitability models is planned.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing

1755	WMMP P6 final page	Baseline data and adaptive management and thresholds	LDN/UFN		Apr 21, 2022	1	New		No	the retention of developing stands of native species that may be of less commercial value could be important resources for bat roosts (e.g. aspen stands containing trees that have defects (cracks, broken limbs, heart rot forming cavities etc...; Vonhof and Wilkinson 1999; Psyllakis and Brigham 2006). During a discussion Greg / Duncan suggested that restoration using aspen may overly attract and create numerical responses by moose. However if isolated trees are planted (not stands) widely spaced (and protected / fenced to increase sapling survival) this could contribute towards roosting habitat in the long term. This could be done at a density of 1 aspen cluster (2-4 trees) every 500 m or so, providing future roost habitat and forest diversity at a suitable density to provide roost habitat but not attracting moose or deer and negatively impacting caribou. Other similar tree species could also be considered as roost restoration for bats.	During a meeting in February 2022, Duncan McColl, FLNRORD, indicated that the province did not support the addition of aspen stands as a mitigation for lost roosting stands for bats, due to the potential for augmenting moose populations. A review of the Vegetation Resource Inventory (VRI) data by FLNRORD also indicated that snags are common in the mine site area, and are unlikely to be a limiting resource for bats. For that reason, FLNRORD suggested focusing habitat augmentation work for bats on augmenting wetlands through the planned wetlands offset in Matthews Creek and through augmentation of water courses and wetlands by removing forestry roads as part of the caribou habitat offset (CMMP). As such, no additional augmentation of roosting habitat is planned using aspen trees.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1756	WMMP Overall	SOPs	LDN/UFN		Apr 21, 2022	1	New		No	We are concerned that baseline data is incomplete and will result in uncertainty regarding thresholds, monitoring methods and sample sizes and how and when adaptive management will be triggered or implemented. We are flagging this to ensure the adequate collection of baseline data is enforced and wildlife survey methods are critically reviewed in the future to ensure wildlife is properly managed in and around the site.	To augment baseline data collected in 2012, 2013 and 2018, pre-construction surveys were conducted in 2021, summarized in the WMMP and reported in the 2021 Pre-Construction Wildlife Report. During 2022, long-term monitoring plots are being established for several wildlife monitoring programs, including: 1) moose and caribou distribution; 2) waterfowl distribution; 3) upland bird distribution; and 4) toad distribution. The WMMP indicates that after the first two years of data collection, a detailed review and power analysis will be conducted, discussed with parties and, if required, updates and modifications to the monitoring programs can be made.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1757	WMMP Overall	Roles and Responsibilities	LDN/UFN		May 12, 2022	1	New		No	SOPs to be provided for review include: Amphibian salvage SOP, Bird pre-clearing SOP, nest monitoring SOP, pre-clearing/construction caribou check SOP.	Thanks you for the comment.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1757	WMMP Overall	Roles and Responsibilities	LDN/UFN		Jul 27, 2022	2	Follow Up	Comment	No	Please provide these for review	The pre-clearing SOPs will be delivered to the UFN and LDN as soon as possible.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: Aug 11	Ready for Publishing
1758	WMMP Section 1.2	Aircraft Management	LDN/UFN		May 25, 2022	1	New		No	During the construction phase, BW Gold will be entering into multiple EPC contracts..." Define EPC in text for clarity.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1758	WMMP Section 1.2	Aircraft Management	LDN/UFN		Jul 28, 2022	2	Follow Up	Comment	No	Carry Forward. Please ensure updates are captured in the next iteration of the plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1759	WMMP Section 3.7	Pre-construction surveys	LDN/UFN		May 25, 2022	1	New		No	"Educate pilots on the importance of limiting helicopter landings near identified sensitive habitat features" How will these features be communicated/demarcated for pilots?	Landscape features can be communicated via maps or waypoints provided for the pilot's GPS. This detail will be added to future iterations of the WMMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1760	WMMP Section 4	Toads	LDN/UFN		May 25, 2022	1	New		No	"In some cases, additional pre-construction surveys are planned for 2022 , prior to construction occurring in an area that would disturb the species or its habitat" What types of pre-construction surveys are planned for 2022? It would be beneficial to list them here for clarity.	The purpose of the text in question was to note that the provincial and federal conditions conflate pre-construction surveys, conducted prior to Constuction of the Project, and pre-clearing surveys conducted immediately in advance of vegetation removal, should vegetation clearing occur in a sensitive season for a wildlife species. It was not meant to be an exhaustive list of surveys to be conducted in 2022. However, planned pre-construction surveys are listed for on a species-by-species basis in Sections 4.1 through 4.9 of the WMMP.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1761	WMMP Section 4.1.3.2	Toads	LDN/UFN		May 25, 2022	1	New		No	"Surveys will occur twice per year, during spring when adults move to breeding ponds and during July..." Will these surveys just be a single day each time?	Section 4.1.3.2 describes monitoring toad mortality on roads. Road-based surveys are planned for multiple days during spring and summer. BW Gold will update the WMMP with this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1762	WMMP Section 4.1.3.3	Toads	LDN/UFN		May 25, 2022	1	New		No	"Surveys of breeding ponds will occur annually during construction, operations, and closure" What time of year?	Experience on site indicates that toad breeding is easiest to detect during the tadpole stage in July. BW Gold will update the WMMP with this revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1763	WMMP Section 4.1.3.3	Toads	LDN/UFN		May 25, 2022	1	New		No	What methodology will be followed for amphibian salvage?	Section 4.1.2 Mitigation for Amphibians indicates that amphibian salvages will follow the Best Management Practices for Amphibian and Reptile Salvages in British Columbia (MFLNRO 2016). This section also indicates that a detailed salvage SOP will be produced prior to amphibian salvage and provided to LDN-UFN . This detailed SOP will be reviewed by the provincial amphibian biologist during the process to issue a salvage permit from the province.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1764	WMMP Section 4.1.3.4	Bats	LDN/UFN		May 25, 2022	1	New		No	"Visual surveys will be conducted in facility waterbodies" Is this the same as monitoring in the following bullet? If so, when each year will these surveys/monitoring be completed? If not, provide more detail on surveys (frequency, timing, etc...)	Section 4.1.3.4 indicates that: "Surveys will follow standard survey methods used during pre-construction surveys, referencing Inventory Methods for Pond-Breeding Amphibians and Painted Turtle (RIC 1998); BW Gold will add additional detail in a future iteration of the WMMP". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1765	WMMP Table 4.2-2	Moose	LDN/UFN		May 25, 2022	1	New		No	"Measurable change in diversity or distribution over time..." How is "measurable" defined in this context?	Table 4.2-2 indicates that a measurable change in diversity or distribution is defined as: "e.g., reduction in number of species or sites with bats." BW Gold will update the trigger for action to be a 50% decline in diversity or distribution in the test sites within the buffer zones. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing

1766	WMMP Table 4.4-1	Moose	LDN/UFN		May 25, 2022	1	New		No	Similar comment to above for "Measurable habitat loss beyond that predicted in the EA"	Habitat loss is measured in hectares. Should the hectares of habitat loss exceed habitat loss predicted in the EA, then the threshold has been surpassed. More detail on the methods used are provided in Section 4.4.3.1 Habitat Loss Monitoring.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1767	WMMP Table 4.4-2	Furbearers	LDN/UFN		May 25, 2022	1	New		No	This trigger and management response table would be useful to have in all sections to include other species as well.	Habitat loss is described in detail for moose in Section 4.4.3.1, with detailed triggers and management responses for direct habitat loss provided in Table 4.4-2. The habitat loss section for the other wildlife VCs point to this section to provide detailed methods. Therefore, Table 4.4-2 applies to all wildlife VCs being monitoring for habitat loss.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1768	WMMP Figure 4.5-1	Furbearers	LDN/UFN		May 25, 2022	1	New		No	The colour used for Snowshoe hare and Weasel sp. Locations are too similar. Please adjust for clarity.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1768	WMMP Figure 4.5-1	Furbearers	LDN/UFN		Jul 28, 2022	2	Follow up		No	Carry Forward. Please ensure the revision is made in next update of plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1769	WMMP Figure 4.5-2	Birds	LDN/UFN		May 25, 2022	1	New		No	Similar to above comment - the colours used for Snowshoe hare and bobcat are very similar. Suggest changing.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1769	WMMP Figure 4.5-2	Birds	LDN/UFN		Jul 28, 2022	2	Follow up	Comment	No	Carry Forward. Please ensure the revision is made in next update of plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1770	WMMP Table 4.7-3	Invertebrates	LDN/UFN		May 25, 2022	1	New		No	"A trend of bird nests in the buffer zones fledging less frequently than normal" What is "normal"? Is there some sort of baseline data used to detect change from this?	Please see the response to comment 1744.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1771	WMMP Section 4.8.3	Caribou offsetting costs	LDN/UFN		May 25, 2022	1	New		No	"Therefore, wetland habitat will be monitored as a proxy will be monitored the As invertebrates have been linked to wetlands and wetland types in the assessment process, the monitoring of wetland habitat loss will occur through measurement of wetland habitat loss." This sentence does not make sense.	BW Gold will revise the sentence. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1772	WMMP Section 4.8.3	Caribou offsetting costs	LDN/UFN		Jun 10, 2022	1	New		No	It is essential that Artemis track restoration payments for offsetting with inflation otherwise they are creating financial risk to the nations who are taking responsibility for the restoration work. Their letter saying they would not track with inflation is unacceptable.	As has been communicated previously, BW Gold respectfully disagrees that the funds should be indexed to inflation. BW Gold's cash proposal for restoration tabled in the December 31, 2021 version of the CMMP was an all-in proposal. Our position on this matter has not changed, and is due in part to the fact that the basis for our calculation of $/km of road restoration was based on an 'upper bound costing' of $6,000/km. In January 2022, FLNRORD presented costs for deactivating forestry roads ranging from $2,000 to $6,000. Costs can vary from very light deactivation ($2,000/km) to full recontouring of in-block spur roads ($4,000/km) to a full restoration of a branch road with culverts, capping, ditching and other features ($6,000/km).	No	LDN/UFN	ERM		Ryan	RT	Ready for Submission	RT: June 25	Ready for Publishing
1772	WMMP Section 4.8.3	Caribou offsetting costs	LDN/UFN		Jul 22, 2022	2	Follow Up	Information Requirement	Yes	Failing to track offsetting payments with inflation needs to be formally discussed with the Nations. Artemis has not yet replied to our letter or justified their failure to follow a fair financial system that allows monetory value to be maintained so that the area of caribou habitat required to be restored can still be restored. The ability to restore the necessary area of habitat required for offsetting is a permit condition and so this is not a matter of opinion but a matter of fullfilling permit reuirements that state the area of offsetting required. Requesting a memo responding to this comment.	As has been communicated previously, BW Gold respectfully disagrees that the funds should be indexed to inflation. BW Gold's cash proposal for restoration tabled in the December 31, 2021 version of the CMMP was an all-in proposal and was subsequently approved by EAO and accepted by ECCC. BW Gold's contribution to the restoration initiatives will be paid in two tranches; one within 30 days of the start of early works construction and the second in equal payments over the first 5 years following commercial production. Our position on this matter has not changed, and is due in part to the fact that the basis for our calculation of $/km of road restoration was based on an 'upper bound costing' of $6,000/km. In January 2022, FLNRORD presented costs for deactivating forestry roads ranging from $2,000 to $6,000. Costs can vary from very light deactivation ($2,000/km) to full recontouring of in-block spur roads ($4,000/km) to a full restoration of a branch road with culverts, capping, ditching and other features ($6,000/km).		LDN/UFN	BWG		Ryan	RT	Ready for Submission	TD, Aug 16	Ready for Publishing
1772	WMMP Section 4.8.3	Caribou offsetting costs	LDN/UFN Steve Ross		Aug 18, 2022	3	Follow Up		Yes	Again we reiterate that not including inflation is unacceptable to general offsetting practice and will without doubt cause the Nations financial risk. The area to be offset has been agreed and your answer includes what are now OLD costs of restoration (costs from 2000 to 6000 dollars per KM). As said previously not including inflation is unacceptable and the costs quoted in your anser will without doubt not represent current or future restoration costs - the answer you provide does not resolve or justify this issue, and not providing the monitary resources to fullfill your offsetting obligations and permit conditions puts your project at risk.	The matter has been raised to Artemis' CEO and company reps have discussed this matter in recent meetings with the Nation reps and members of the Keefer team.		LDN/UFN	BWG		Ryan		Ready for Submission	RT; sept 15	Ready for Publishing
1772	WMMP Section 4.8.3	Caribou offsetting costs	LDN/UFN Steve Ross		Oct 06, 2022	4	Follow Up		Yes	We have started discussions on caribou offsetting costs, area to be restored and inflation with Travis and so will keep the above comment open untill resolved. We are waiting to hear back from BW Gold on this matter.	The matter has been raised to Artemis' CEO and company reps have discussed this matter in recent meetings with the Nation reps and members of the Keefer team.		LDN/UFN	BWG					TD, Oct 20	Ready for Publishing
1772	WMMP Section 4.8.3	Caribou offsetting costs	LDN/UFN Mikayla Davis		Nov 17, 2022	5	Follow Up		Yes	We have heard from LDN that the ideas outlined in the November 10th email are non-starters, lacking in substance, and are very one sided in the interest of BW Gold. More discussion and firm commitments from BW Gold are required.	Response is noted and BW Gold continues to consider next steps on this matter.		LDN/UFN	BWG					RT; dec 1	Ready for Publishing
1773	Archaeological and Cultural Heritage MP Section 2		LDN/UFN		Jun 06, 2022	1	New		No	Edit: "...cultural or archaeological significance to a community or an aboriginal people." - please change "aboriginal" to "Indigenous"	BW Gold will make the suggested revision, noting that in some instances the term "Aboriginal" is being used in a manner consistent with the EAC definition for consistency. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1774	Archaeological and Cultural Heritage MP Sections 7.3, 8.2, 9		LDN/UFN		Jun 06, 2022	1	New		No	Edit: References to "ceremony' should be amended to "ceremony or appropriate cultural protocols"	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing

1774	Archaeological and Cultural Heritage MP Sections 7.3, 8.2, 9		LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated management plan for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for ERM Review	RT; Aug. 11	Ready for Publishing
1775	Archaeological and Cultural Heritage MP Section 10.3		LDN/UFN		Jun 06, 2022	1	New		No	It might be prudent to for this section to include details about how access will be provided to sites, including considerations such as who will provide transporation to the sites - will it be BW or the Indigenous Nations? How will Elders or those with limited mobility be accommodated?	Transportation details are outside the scope of this Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1776	Archaeological and Cultural Heritage MP Section 2, Pg 2-1	Referencing	LDN/UFN Wayne Choquette		Jun 06, 2022	1	New		No	No mention of Heritage Conservation Act or Section 12 Site Alteration Permit.	CSMP Section 2.1 References HCA Section 12.4 Permit.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1776	Archaeological and Cultural Heritage MP Section 2, Pg 2-1	Referencing	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	The summary in the CSMP (which is an appendix to the ACHMP) provides much better information and should be incorporated into Section 2 of the ACHMP	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1777	Archaeological and Cultural Heritage MP Section 5, Pg 5-1	Referencing	LDN/UFN Wayne Choquette		Jun 06, 2022	1	New		No	"An AIA under Permit #2012-0295 was undertaken in fall 2012 and summer 2013, which covered the mine site footprint and Project linear infrastructure (AMEC 2013)" This reference is not for a permit report (which is not accessible on PARL), it's for the "Baseline Report" which is identified, for some reason, as a "secondary source"p 15-1. Given that an AIA is a primary investigation, it should not be considered as a secondary source.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RTI; June 18	Ready for Publishing
1777	Archaeological and Cultural Heritage MP Section 5, Pg 5-1	Referencing	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	unresolved until we receive an updated management plan which incorporates the revisions	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1778	Archaeological and Cultural Heritage MP Section 2, Pg 2-1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 06, 2022	1	New		No	No mention or definition of "mitigation	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1778	Archaeological and Cultural Heritage MP Section 2, Pg 2-1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	The ACHMP Mitigation discussion should clarify the discrepancy between the conclusions of both the AIA and Section 8 documents in recommending systematic data recovery whereas avoidance is the only management measure in the ACHRMP. See also comments below for additional information to be incorporated into ACHMP Mitigation discussion. Unresolved until we receive an updated management plan which incorporates the revisions	Section 6.1.1 includes the following statement "If the site cannot be avoided then mitigation must be conducted prior to impact. Procedures to record, analyse and mitigate effects on a site will be determined in consultation with the BC Archaeology Branch and Aboriginal Groups and carried out by an archaeologist under sections 12.2 (heritage investigation) and 12.4 (site alteration) of the Heritage Conservation Act. Mitigation may involve detailed mapping, photography, and systematic data recovery through surface collection and controlled excavations of 1x1 m units if subsurface deposits are present. Where applicable, post-1846 CMTs are not protected and any mitigations would not be covered by the scope of a Heritage Conservation Act permit. "		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1779	Archaeological and Cultural Heritage MP Section 3,Pg 3-2	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"The general scope of the monitor's activities will be related to monitoring for potential effects from the Project on the Aboriginal Group's Aboriginal interests." This implies monitoring in aid of preservation, not monitoring as mitigation in the form of salvage data retrieval, and these individuals, unless specially trained and under SAP wouldn't be doing that kind of "monitoring".	The intent of monitoring is to aid in preservation of sites. If required, monitoring of impacts to an archaeological site will be detailed under the relevant permit under Sections 12.2 or 12.4 of the HCA.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1779	Archaeological and Cultural Heritage MP Section 3,Pg 3-2	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	New		No	This should be clarified in the "Mitigation" description/discussion to be added to the ACHMP per response to comment 1778. Unresolved until we receive an updated management plan which incorporates the revisions	The following text will be added to Section 6 to clarify the term mitigation. "Protection measures for known sites are provided below. These measures, inclusive of site avoidance, are considered mitigations. If avoidance is not a feasible mitigation for preventing impacts to sites then additional mitigations will be added including, but not limited to, additional data gathering to preserve information about the site." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for ERM Review	RT; Aug. 11	Ready for Publishing
1780	Archaeological and Cultural Heritage MP Section 4.1.1, Pg 4-1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Heritage Conservation Act: no mention or definition of "mitigation" or Site Alteration Permit	As the management plan has been submitted to ENV the definitions of mitigation and Site Alteration Permit will be included in the next update of the CHMP.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1780	Archaeological and Cultural Heritage MP Section 4.1.1, Pg 4-1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	New		No	unresolved until we receive an updated management plan which incorporates the revisions	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing

1781	Archaeological and Cultural Heritage MP Section 5, Pg 5-1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Known Archaeological Sites identifies 5 “within the mine site” (FhSe-73, 74; FhSf-4,7,8) but the Section 8 Heritage Baseline report only identifies 3 (FhSe-73, 74; FhSf-4). There is an unmentioned discrepancy between Section 8 Fig 8.2-3 and the ACHRMP Fig 5.1.1 “certified project description” regarding the southwestern most project boundary. FhSe-73 contents identified as “chalcedony flake” [as also does Section 8 Heritage Baseline but in the AIA report p 21 this is identified as “dull, light brown chert”]; FhSf-4 “subsurface lithic scatter, 1 rhyolite flake, 1 grey chert scraper” [Section 8 Heritage Baseline Table 8.2-4 says this is an “Isolated artifact, single chert scraping tool”]; FhSf-8 “unspecified contents” [but AIA p 25 identifies “a single piece of basalt flake shatter”]	These additional sites are included, though almost a kilometer from currently proposed infrastructure, as they are within the Mine Site Boundary as currently defined. These references are to AMEC Baseline (2013) and AIA Report (2017). Site descriptions will be updated to align with AIA Report on file with the Archaeology Branch (AMEC 2017)	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1781	Archaeological and Cultural Heritage MP Section 5, Pg 5-1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	The “high level site description” does not in itself account for the discrepancy in how many sites are within the present mine site compared to those identified in the documents cited in the ACHRMP - a brief summary of the history of archaeological investigation, properly cited, and of the mine boundary changes would be useful to clear up this discrepancy as well as addressing the problems with referencing. Unresolved until we receive an updated management plan which incorporates the revisions.	Site descriptions will be updated in the subsequent version of the ACHMP to align with AIA Report on file with the Archaeology Branch (AMEC 2017) and to clarify that the additional sites were recorded during the AIA for the project and were described in the report as within a fish compensation study area but outside the project footprint (AMEC 2017) but currently fall within the Mine Site Boundary.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT: Aug 11	Ready for Publishing
1782	Archaeological and Cultural Heritage MP Section 12	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	“Archaeological impact assessments will be conducted in areas of mine components that have not been previously assessed prior to construction.” It was not mentioned in 5. Baseline CHR Information that the AIA was incomplete.	This mitigation is provided in case there are future revisions to the mine plan that were not accounted for in the original or current AIA.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1782	Archaeological and Cultural Heritage MP Section 12	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	Wouldn’t “this provision” be better terminology than "mitigation"? Otherwise, it just adds further to the already inadequately defined “mitigation” (see comment 1778). If such revisions do occur, please ensure that they are more fully and precisely documented than has the work conducted up to this ACHMP. Unresolved until we receive an updated management plan which incorporates the revisions.	Thank you for your response. It is BW Gold’s understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1783	Archaeological and Cultural Heritage MP Section 6.1, Pg 6-1	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	“will be undertaken for Protect activities located within 0 to 50 m of a known site” [why this distance > reference? It’s inconsistent with S 7.2.5.2 of the Concordance with Federal Decision document which identifies a 30 m buffer] “If the site is impacted” [when? During construction?] the EM contacts the Project archaeologist to determine if additional mitigation measures are required” [wouldn’t that be the Arch Banch / First Nation’s decision? and what about the First Nation monitors?] “If the site cannot be avoided then mitigation must be conducted prior to impact…” [this should precede the above measure. Definition of what mitigation is to consist of?]	CSMP Section 8.1.1 includes text defining why the No Work Zone was increased to 50 m "...to align with Archaeology Branch's Remote Access to Archaeological Data areas of high archaeological potential" and that "If the impacts to the site will occur then mitigation must be conducted prior to impact. Procedures to record, analyze and mitigate effects on a site will be determined in consultation with the BC Archaeology Branch and affected Indigenous groups as per the Heritage Conservation Act permit and carried out by an archaeologist under a Heritage Conservation Act (Section 12.2 heritage investigation and/or Section 12.4 site alteration permits). Mitigation measures will be dependent on the specifics of the archaeological site and the levels of impact. Mitigations generally involve detailed mapping, photography, and systematic data recovery through surface collection and controlled excavations of evaluative units if subsurface deposits are present."	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1783	Archaeological and Cultural Heritage MP Section 6.1, Pg 6-1	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	As with comment 1776, if the ACHMP is the primary document, to which the CSMP is an appendix (as is also the deviating Concordance with Federal Decision document), this clarifying text should be in the ACHMP. Unresolved until we receive an updated management plan which incorporates the revisions.	Thank you for your response. It is BW Gold’s understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1784	Archaeological and Cultural Heritage MP Section 6.3	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	“Prior to alteration to post-1846 CMTs the relevant/affected Indigenous communities will be consulted to determine, if necessary, the preferred mitigation measures. … Common mitigation measures … allow for the preservation of some or all of the information about the modification(s) made to the tree.” [while it doesn’t actually say it, apparently there are no pre-1846 CMTs and again, mitigation measures have not yet been determined, although some examples are at least identified]	Correct - no pre-1846 CMTs have been identified.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1784	Archaeological and Cultural Heritage MP Section 6.3	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	To avoid the reader/user of the Plan document having to assume this, Section 5.2 should explicitly state that no pre-1846 CMTs were found. Unresolved until we receive an updated management plan which incorporates the revisions.	Thank you for your response. It is BW Gold’s understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1785	Archaeological and Cultural Heritage MP Section 6.4	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	“There are no known trails located within the mine site. Prior to the alteration of a trail the relevant/affected Indigenous communities will be consulted …” [this seems contradictory – shouldn’t these groups have already been consulted to determine if there are any trails? So what is the information source for there not being any?]	No trails have been identified to BW Gold within the Mine Site based on past consultation. The CSMP 8.1.4 states that "There are known trails located along the proposed transmission line routes. Prior to the alteration of a trail, the relevant/affected Indigenous communities will be consulted to determine the preferred mitigation measures." If trails are identified within the mine site they can be included in updated versions of the MP though Adaptive Management (Section 5) and Plan Revision (Section 12).	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 20	Ready for Publishing
1785	Archaeological and Cultural Heritage MP Section 6.4	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	Clarify this by replacing “There are no known trails located within the mine site" with "No trails have been identified to BW Gold within the Mine Site based on past consultation".	CSMP 8.1.4 will be updated in the subsequent version to include: "No trails have been identified to BW Gold within the Mine Site based on past consultation". BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1786	Archaeological and Cultural Heritage MP Section 10.1	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	“Archaeological and CHR sites within 150 m of the Project footprint will be marked on Protect site maps … Should impact be anticipated, or found within 50 m of a site …” [again, what is the reference for these distances?] “Aboriginal Groups and Project Archaeologist will be contacted to determine if additional mitigation measures are required. The EM will be debriefed on the proposed mitigation measures.” [additional to what? None have yet been explicitly defined]	CSMP Section 8.1.1 includes text defining why the No Work Zone was increased to 50 m "...to align with Archaeology Branch's Remote Access to Archaeological Data areas of high archaeological potential." The 150 m distance was included to account for potential indirect effects due to increased human presence in the area.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1786	Archaeological and Cultural Heritage MP Section 10.1	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	While it would seem to be a sufficient distance, this response does not explain why 150 m was chosen as the buffer – the rationale should be explicated: if it is related to a standard, this should be referenced, if it’s an arbitrary distance, this should be stated.	CSMP Section 8.1.1 will be updated in subsequent version to reflect that the 150 m distance chosen is an arbitrary distance. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker		Ready for Submission	RT; Aug. 14	Ready for Publishing
1787	Archaeological and Cultural Heritage MP Section 10.2	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	[Again, this is evidently not monitoring in the sense of emergency salvage data recovery during impact via SAP] “… Should impacts be observed at sites, the Project Archaeologist (while the Heritage Inspection Permit is valid)” [and then what?] “and the Archaeology Branch will be contacted to determine mitigation measures. Should impacts be observed at archaeological and CHR sites, the EM will contact Traditional Knowledge Holder(s) of Aboriginal Groups to discuss mitigation measures. [inconsistent with the immediately preceding sentence]	This is not emergency salvage monitoring. CSMP Section 10.2.1 has been updated "Should impacts be anticipated, or found within 50 m of a site, Indigenous groups and the Project Archaeologist will be contacted immediately to determine if additional mitigation measures are required prior further work in the area." In Section 10.2.2, "For the life of the Project the BW Gold EM and Aboriginal Monitors will, on an annual basis, verify that known heritage sites remain intact and are not impacted by the Project and check the condition of site protection (i.e.., flagging or fencing). Should impacts to the vegetation or ground surface since the previous observation be observed at sites, the Project Archaeologist and the Archaeology Branch will be contacted to determine mitigation measures. Should impacts be observed at heritage sites, the BW Gold EM will contact Indigenous Knowledge Holder(s) to discuss mitigation measures. "	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing

1788	Archaeological and Cultural Heritage MP Section 13	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"The plan may be updated as frequently as every year, or not at all if the management and mitigations measures are found to be robust by a qualified person." [what mitigation measures? None have been explicitly identified, only protection measures in which not a lot of confidence has been expressed]	Section 8.1.1 of the CSMP includes "Procedures to record, analyze and mitigate effects on a site will be determined in consultation with the BC Archaeology Branch and affected Indigenous groups as per the Heritage Conservation Act permit and carried out by an archaeologist under a Heritage Conservation Act (Section 12.2 heritage investigation and/or Section 12.4 site alteration permits). Mitigation measures will be dependent on the specifics of the archaeological site and the levels of impact. Mitigations generally involve detailed mapping, photography, and systematic data recovery through surface collection and controlled excavations of evaluative units if subsurface deposits are present."	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1788	Archaeological and Cultural Heritage MP Section 13	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	If the ACHMP is the primary document, to which the CSMP is an appendix, this clarifying text should be in the ACHMP, in the mitigation definition/description that BW Gold has committed to adding per comment 1778. Unresolved until we receive an updated management plan which incorporates the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker		Ready for BWG Review		Ready for Publishing
1789	Archaeological and Cultural Heritage MP Appendix A, Pg 2	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"The Project Archaeologist works with the EM and Indigenous groups to prepare Site Report, which includes instruction to recommence work in the area" [awkward wording (at best) which could be construed as an expectation that the Site Report's intent is to authorize recommencing work]	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1789	Archaeological and Cultural Heritage MP Appendix A, Pg 2	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved until we receive an updated management plan which incorporates the revisions	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker		Ready for BWG Review		Ready for Publishing
1790	Archaeological and Cultural Heritage MP Section 4.3, Pg 8	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Archer CRM Partnership Permit 2021-0322 for Blackwater mine area and transmission line" [this permit report is also not accessible on PARL]		No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1791	Archaeological and Cultural Heritage MP Section 7.1, Pg 11	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Permit 2012-0295 AIA undertaken 2012-13 "which covered the mine site footprint and Project linear infrastructure" (AMEC 2013) [this is identified in the references as the "Baseline Report" - why no citation of the 2017 report in the references, which is the 2012-0295 permit report but dated 2017?]	References to the permit report will be added in the next iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission		Ready for Publishing
1792	Archaeological and Cultural Heritage MP Section 14, Pg 31	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	References [shows a second AMEC report, this time for the Permit Report 2012-0295 but the date is 2017 and its cited as prepared for New Gold with no reference to the Archaeology Branch Ministry Library and thus not consistent with the suggested citation in the AIA report] "Amec 2017 AIA Report P ii Suggested Citation: Amec Foster Wheeler (2017). New Gold – Blackwater Gold Project Archaeological Impact Assessment: Permit Report 2012-0295. Consultants' report on file, Archaeology Branch, Ministry of Forests, Lands and Natural Resource Operations, Victoria." [This report is not mentioned or cited anywhere in the bodies of either the ACHRMP or CSRMP documents]	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1793	Archaeological and Cultural Heritage MP Table 7.1.2	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	[Known sites near Transmission Line identifies 10 different permits (two are likely typos), only two of which are ever mentioned elsewhere in this report.]	BW Gold will make the suggested revision - 2021-032 and 2012-0296 references will be corrected. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1794	Archaeological and Cultural Heritage MP Section 4.1.1, Pg 7	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	re HCA Part 1 Sec 4: "An agreement under this section provides protection under section 12.1" [relevance? - does not say whether or not there any such agreements between BC and any of these First Nations or with regard to this project]	This is mentioned as a potential method to provide protection to intangible cultural and spiritual resources in the discussion of the HCA.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1794	Archaeological and Cultural Heritage MP Section 4.1.1, Pg 7	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	The way this is presented in the document, it is only rather ambiguously implied as there is no mention that any such agreements are being negotiated or in place. This could be clarified by adding "However," to the beginning of the sentence beginning with "Part 1 Section 4 …"	Noted - BW Gold will make the suggested revision. Text will be updated in the subsequent version to include: "However,"		LDN/UFN	ERM		Daniel Walker		Ready for Submission	RT: Aug 11	Ready for Publishing

1795	Archaeological and Cultural Heritage MP Section 5. Pg 9	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Prior to site disturbance, complete AIA(s) within or adjacent to Project components that have not been previously assessed due to changes to infrastructure footprints to identify heritage sites." [the relationship of the existing AIA to the project with regard to the need for future AIAs has never been explicitly defined, i.e.. how much of the proposed project has actually been assessed and which areas remain to be assessed?] "Engage with Indigenous groups to identify cultural and spiritual sites and related mitigation measures. "Engage with Indigenous groups to determine confidentiality or known sites" [typo: of? For this and the immediately preceding engagement, one would think that this had been done previously, as part of the AIA or certainly prior to the development of these CHR plans] "Do – Implement mitigation measures for known Heritage Resources" [what exactly are these? What is their relationship to conservation measures? Monitored buffers around known sites are identified but avoidance is apparently not an absolute. No other mitigation measures have been identified or described; this identification seems to be awaiting impact] "Adjust – EM review of effectiveness of prevention measures" [are these the same as conservation measures / efforts? Again, this is inconsistent and confused – if mitigation measures have already previously been implemented under "Do", then what is being prevented? If these are separate but contemporary components, there needs to be some rationalization and description of which measures are to be applied to which sites / "things" when why and how.]	Current components within the mine site were completely assessed under 2012-0295. Revisions to the Transmission Line are being assessed under 2021-0322. If there are future revisions to the project footprint that are not captured under these assessments, they will be assessed prior to construction. Typos will be addressed in future iterations of the plan. This is a commitment to ongoing engagement and takes into account both presently known sites and sites that may be identified in the future. Mitigation measures are identified in Section 8 of the CSMP and include avoidance through the implementation of No Work Zones. If avoidance is determined not to be feasible, implementation of site-specific data recovery measures will occur, determined in consultation with Indigenous Groups and, in the case of archaeological sites, the Archaeology Branch. The adjustment is to identify any flaws in implementation and adjust accordingly.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1795	Archaeological and Cultural Heritage MP Section 5. Pg 9	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Aug 30, 2022	3	Follow Up	Comment	No	No response provided. Please respond.	Currently proposed components within the mine site (including mine access road, airstrip and fresh water pipeline) were completely assessed under 2012-0295. Revisions to the Transmission Line are being assessed under 2021-0322. If there are future revisions to the project footprint that are not captured under these assessments, they will be assessed prior to construction.		LDN/UFN	ERM		Daniel Walker		Ready for Submission	RT; sept 15	Ready for Publishing
1796	Archaeological and Cultural Heritage MP Section 7, Pg 11	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Permit 2012-0295 AIA undertaken 2012-13 "which covered the mine site footprint and Project linear infrastructure" (AMEC 2013) [why the repeated references to more AIAs but no clear identification of mitigative measures, especially those recommended in the original AIA?]	Preservation measures align with those in the Permit Report 2012-0295 (avoidance or additional work under HCA Permit).	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1796	Archaeological and Cultural Heritage MP Section 7, Pg 11	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Aug 30, 2022	3	Follow Up	Comment	No	No response provided. Please respond.	Preservation measures align with those in the Permit Report 2012-0295 (avoidance or additional work under HCA Permit). If avoidance is not feasible site specific mitigtions will be developed and detailed in HCA Investigation and/or Site Alteration Permit.		LDN/UFN	ERM		Daniel Walker		Ready for Submission	RTI; sept 15	Ready for Publishing
1797	Archaeological and Cultural Heritage MP Section 8	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Section 8 recognizes avoidance as the preferred option" and that if site impact occurs without prior mitigation "then penalties may be levied in accordance with applicable law" [this is not particularly decisive and can easily be read that site disturbance is not forbidden, it's potentially only a possible cost of doing business.] Section 8.1.1 states that "If the impacts to the site will occur then mitigation must be conducted prior to impact. Procedures to record, analyze and mitigate effects on a site will be determine in consultation with BC Arch Branch and affected Indigenous groups …" [This sentence seems to be internally contradictory. It looks like this wording is just boilerplate taken from the concordance document and again, definition of mitigation is deferred, in this case until it is identified but prior to impact - isn't this what an AIA is supposed to do? This would have been the appropriate point to detail the results of the AIA, instead of just briefly tabulating the sites by type and relationship to project component]	The AIA recommendations are avoidance or additional work under the HCA permit. The permit report recommends work be conducted under Site Alteration Permit but, currently, the process would involve conducting work under an Investigation permit and then the issuance of the Site Alteration Permit.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1797	Archaeological and Cultural Heritage MP Section 8	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	As with 1796, this intent should be clearly stated and properly referenced to avoid the ambiguity and inconsistency in the present document. A sentence summarizing the AIA recommendations in the context of the present mine project (along the lines of this comment response) could be included in the recommended archaeological investigation summary (see 1781). Unresolved until we receive an updated management plan which incorporates the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1798	Archaeological and Cultural Heritage MP Section 8.2	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"As yet unknown sites" [again a reference to areas not assessed via AIA. This report should include a clear discussion of the actual extent and intensity of AIA coverage]	This mitigation is provided in case there are future revisions to the mine plan that were not accounted for in the original or current AIA.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1798	Archaeological and Cultural Heritage MP Section 8.2	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	2	Follow Up	Comment	No	Wouldn't "provision" be a better term? Otherwise, it just adds further to the already inadequately defined "mitigation" (see comment 1778). If such revisions do occur, please ensure that they are more fully and precisely documented than has the work conducted up to this ACHMP. Unresolved until we receive an updated management plan which incorporates the revisions.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1799	Archaeological and Cultural Heritage MP Section 9, Pg 22	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Known sites identified to BW Gold during and subsequent to the project's environmental assessment as described in Section 7.3 will form the basis of the discussion. Cultural or spiritual resources identified during consultation as part of Condition 15 will be considered in the implementation of this plan as appropriate." [Condition 15 not included in the appendices]	Noted - BW Gold will make the suggested revision - Condition 15 will be added to Appendices. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1799	Archaeological and Cultural Heritage MP Section 9, Pg 22	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved until we receive an updated management plan which incorporates the revisions	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing
1800	Archaeological and Cultural Heritage MP Section 10	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Implementation …. Will be used to determine if altered or new mitigation measures are effectively mitigating effects or avoiding potential effects." [conflating avoidance with mitigation – no specific definition of mitigation in these reports, just proposed avoidance and non-permitted monitoring]	Avoidance is a provided as a mitigation measure.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing

1800	Archaeological and Cultural Heritage MP Section 10	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	Based on the definitions of the words, avoidance is not technically a mitigation measure, it is a conservation measure. There are very useful reasons to keep them distinct, at the very least what used to be a conventional approach: 'if avoidance is not possible, then mitigation is required', there being a variety of mitigation strategies depending upon the specific type of development and situation. As is identified in the BC Archaeological Impact Assessment Guidelines, avoidance and mitigation are two different tactics and stages in resource management and it does not improve communication to conflate the two by labelling every measure after site assessment as "mitigation". However, given that the distinction between the two is also blurred in those same Guidelines, if these documents persist in lumping everything as mitigation, then it is incumbent upon them to clearly define what mitigation consists of (comment 1778) and to ensure specificity when a particular mitigation measure is being referred to. Unresolved until we receive an updated management plan which incorporates the revisions.	The proposed change of mitigation to "provision" as well as the definitions of mitigation and Site Alteration Permit previously mentioned in comment 1780 will be included in the next update of the CHMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1801	Archaeological and Cultural Heritage MP Section 10.2.1	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Condition #2 (Plan Development) e) requires means and scheduling by which mitigation measures are to be evaluated; refers to Section 10 [which mentions transmission line AIA and site access but mostly deals with monitoring; this condition doesn't actually require any description of the mitigation measures themselves]	Mitigation measures in addition to avoidance.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1801	Archaeological and Cultural Heritage MP Section 10.2.1	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	See comment 1800. Resolution will depend on how clearly "mitigation" is defined (see comment 1778). Unresolved until we receive an updated management plan which incorporates the revisions.	The proposed definitions of mitigation and Site Alteration Permit previously mentioned in comments 1778 and 1780 will be included in the next update of the CHMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1802	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Condition #2 (Plan Development) e) requires means and scheduling by which mitigation measures are to be evaluated; refers to Section 10 [which mentions transmission line AIA and site access but mostly deals with monitoring; this condition doesn't actually require any description of the mitigation measures themselves]	CSMP Section 10.4 references the implementation schedule.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1802	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	See comment 1800. Resolution will depend on how clearly "mitigation" is defined (see comment 1778). Unresolved until we receive an updated management plan which incorporates the revisions.	The proposed definitions of mitigation and Site Alteration Permit previously mentioned in comments 1778 and 1780 will be included in the next update of the CHMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1803	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	3. (Adaptive Management); refers to Sections 5 and 13 [this refers to monitoring of mitigation measures but again, none have ever been identified as such; the "monitoring" is in areas flagged for avoidance, which is not actually mitigation, the latter has several times been specifically identified as pending and is never described]	Avoidance is a mitigation measure to prevent effects to archaeological and cultural heritage.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1803	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	See comment 1800. Resolution will depend on how clearly "mitigation" is defined (see comment 1778). Unresolved until we receive an updated management plan which incorporates the revisions.	The proposed definitions of mitigation and Site Alteration Permit previously mentioned in comments 1778 and 1780 will be included in the next update of the CHMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1804	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	i) [Section 13 is "Qualified Person or Qualified Professional" [maybe this refers to Section 12 Plan Revision but it does not provide a description of the process for altering existing mitigation because this has itself never been described – it's either conflated with avoidance or it's deferred to the future.)	Avoidance is a mitigation measure to prevent effects to archaeological and cultural heritage.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1804	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up		No	See comment 1800. Resolution will depend on how clearly "mitigation" is defined (see comment 1778). Unresolved until we receive an updated management plan which incorporates the revisions.	The proposed definitions of mitigation and Site Alteration Permit previously mentioned in comments 1778 and 1780 will be included in the next update of the CHMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1805	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	j, k, l) [Section 13 does not address issues j, k or l. Section 12 is brief and very general. Given the sparseness of the recorded sites, there has never been a discussion regarding significance or any real reference to the AIA sampling process or results]	Section 5 addresses Adaptive Management and includes a provision to complete additional AIAs for project development in areas that have not been previously assessed. Section 12 address adaptive management through revisions to the Plan. If mitigation through Systematic Data Recovery is required, site significance will be a factor in the determination of methods during the application for an Investigation permit under Section 12.2 of the HCA.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 20	Ready for Publishing
1805	Archaeological and Cultural Heritage MP Table A-1	Compliance	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	Both Sections 5 and 12 are very general; Section 5 in particular would benefit from being able to identify specific actions in reference to the clarifying definition of "mitigation" committed to in response to comment 1778.	While exact mitigation measures will be dependent on the specifics of the archaeological site and the levels of impact, investigations of archaeological sites under Section 12.2 of the HCA generally involve detailed mapping, photography, and systematic data recovery through surface collection and controlled excavations of 1x1 m units if subsurface deposits are present. Following completion of the work under the 12.2 HCA Permit a Section 12.4 Site Alteration Permit may include additional requirements such as artifact collection, if present, and monitoring of impacts. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1806	Archaeological and Cultural Heritage MP 7.2.1	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"procedures to record, analyze and mitigate the effects on cultural heritage resources … previously identified through the heritage effects assessments"… [mitigation is never specifically discussed nor any site specific mitigative measures identified; only avoidance by flagging and monitoring, then if impacts occur, need for mitigation is to be discussed with Arch Branch and First Nations]	CSMP 8.1.1: "Avoidance is a mitigation measure to prevent effects to archaeological sites. If avoidance is not feasible and impacts to the site will occur, then additional mitigation must be conducted prior to impact. Procedures to record, analyze and mitigate effects on a site will be determined in consultation with the BC Archaeology Branch and affected Indigenous groups, as per the Heritage Conservation Act permit and carried out by an archaeologist under a Heritage Conservation Act (Section 12.2 heritage investigation and/or Section 12.4 site alteration permits). Mitigation measures will be dependent on the specifics of the archaeological site and the levels of impact. Mitigation may usually involve detailed mapping, photography and systematic data	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1806	Archaeological and Cultural Heritage MP 7.2.1	Compliance	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	See comment 1800 re avoidance, and 1776 re the relative level of detail provided in the ACHRMP as the primary document vs the CSMP which is an appendix. The information in CSMP 8.1.1 should be incorporated into the clarifying definition of "mitigation" committed to in response to comment 1778.	Proposed definitions of mitigation and Site Alteration Permit previously mentioned in comments 1778 and 1780 will be included in the next update of the ACHRMP and aligned with the CSMP.		LDN/UFN	ERM		Daniel Walker	RT	Ready for BWG Review		Ready for Publishing

1807	Archaeological and Cultural Heritage MP 9.1.1	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	[there is only Sec 9, no subsections; Condition 15 referenced therein but not included in the appendices]	BW Gold will make the suggested revision - section references in the Appendix will be updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1808	Archaeological and Cultural Heritage MP 7.2.5.2	Compliance	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	re chance find procedure: "delineate an area of at least 30 m around the discovery as a no work zone" [refers to Appendix C which specifies the area to be at least 50 m]	50 m was used rather than 30 m in accordance with the Archaeology Branch's area for high archaeological potential around archaeological sites.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1809	Archaeological and Cultural Heritage MP Section 8.1.1, Pg 8-6	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"An AIA conducted under Heritage Inspection Permit #2012-0295, issued by the Archaeology Branch, was undertaken in fall 2012 and summer 2013 for the mine site footprint, transmission line, mine access road, freshwater supply pipeline, airstrip and access road, and the realignment of the Kluskus FSR between KM 104+900 and KM 106+738. The results of the AIA are presented below. [no specific citation, and is this the same thing as the "Baseline Report"? why was this document not summarized in the CSRMP or even cited in the CHRMP?]	BW Gold will make the suggested revision - citation for AMEC 2017 AIA Report will be added. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1809	Archaeological and Cultural Heritage MP Section 8.1.1, Pg 8-6	Referencing	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	unresolved until we receive an updated management plan which incorporates the revisions	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for ERM Review	RT; Aug. 11	Ready for Publishing
1810	Archaeological and Cultural Heritage MP Table 7.1.2	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Transmission line identifies 10 different permits (two are likely typos), only two of which are ever mentioned elsewhere in this report.	BW Gold will make the suggested revision - 2021-032 and 2012-0296 references will be corrected. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1810	Archaeological and Cultural Heritage MP Table 7.1.2	Referencing	LDN/UFN Wayne Choquette		Jul 22, 2022	2	New		No	unresolved until we receive an updated management plan which incorporates the revisions	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for ERM Review	RT; Aug. 11	Ready for Publishing
1811	Archaeological and Cultural Heritage MP Figure 8.2-6	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	[why no shovel testing on the north side of Chedakuz Creek, the drainage outletting from Tatalkuz Lake? Map shows very high density of archaeological sites around the whole lake plus what appear to be at least apron-fan terraces along the north side of the outlet as well as one confluence within the RW and 3 more immediately to the south; this area is transected by the Messue Trail, FhSe-43. Pedestrian survey coverage is less intensive than along other parts of the RW and focusses more closely on the FSR than on the trans line centreline. Poor mapping AIA Figure 2-32 shows several test locations.]	Comment on MP submitted with EA - Noted, but this is a comment on a historic report that will not be revised.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1812	Archaeological and Cultural Heritage MP Table 8.2-6	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	identifies "General High Level Mitigation" but it's only Implementation of guidelines such as the Forest Practices Code, BMPs and environmental management plans	Comment on MP submitted with EA - Noted, but this is a comment on a historic report that will not be revised.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1813	Archaeological and Cultural Heritage MP 8.2.2.3.6, Pg 8-28-29	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Based on the archaeological background study and the AIA, 13 archaeological sites will be affected by the Project. These 13 archaeological sites require protection and/or mitigation" [clearly differentiates the two] "The AHRMP will guide the identification, recording, assessment, consultation, and avoidance and/or data recovery mitigation options. [clearly differentiates the two]	Comment on MP submitted with EA - Noted, but this is a comment on a historic report that will not be revised.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1814	Archaeological and Cultural Heritage MP 8.2.2.3.6.1	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Given that the Project cannot be redesigned to avoid sites FhSe-73, FhSe-4, and FhSf-4, then systematic data recovery, in the form of controlled archaeological excavation, is recommended prior to the commencement of the construction phase. These investigations must be undertaken by a qualified archaeologist under a Heritage Investigation Permit pursuant to section 14 or Site Alteration Permit pursuant to section 12 of the HCA. In addition, the Archaeology Branch will require that any ground-altering activity be monitored by archaeologists under a permit pursuant to section 12 of the HCA."	BW Gold will make the suggested revision - if the site cannot be avoided, BW Gold will add these mitigations to the CSMP Management Plan prior to construction. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1814	Archaeological and Cultural Heritage MP 8.2.2.3.6.1	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	why is the clarifying text not being added to the ACHMP – isn't it the primary "Management Plan" document?	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1815	Archaeological and Cultural Heritage MP Table 8.2-8	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Mitigation Measures and Effectiveness of Mitigation to Avoid or Reduce Potential Effects on Archaeological Sites of the Land during Mine Site Development" [calls them mitigation/enhancement, ranks all High but differentiates site protection from Systematic data recovery, Surveillance and Monitoring	Noted.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1816	Archaeological and Cultural Heritage MP Pg 8-32	Mitigation	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"With the implementation of proposed mitigation measures (i.e.., site protection methods, systematic data recovery, and/or archaeological surveillance and monitoring) where expected Project effects cannot be avoided, information from archaeological sites regarding prehistoric Aboriginal use within the Project footprint will be identified and recorded. Residual Project effects on archaeological sites are therefore considered negligible after mitigation is implemented". [this statement again clearly differentiates mitigation from avoidance, although it still includes surveillance and monitoring, which are facilitative actions, and actually neither protective nor mitigative in themselves]	They are all designed as measures to mitigate impacts to archaeological sites: avoidance is a mitigation measure to preserve archaeological sites intact; monitoring and surveillance are mitigations to evaluate the effectiveness of avoidance; and SDR is a mitigation to preserve the data about an archaeological site in advance of impacts where the avoidance mitigation has been determined to not be feasible. BW Gold will add clarifying text to the CSMP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1816	Archaeological and Cultural Heritage MP Pg 8-32	Mitigation	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow Up	Comment	No	why is the clarifying text not being added to the ACHMP – isn't it the primary "Management Plan" document?	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing

1817	Archaeological and Cultural Heritage MP Section 3.2, Pg 17	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"Criteria used to define polygons of moderate or high archaeological potential are separated into macrosite and microsite landscape attributes. Macrosite criteria apply to the determination of archaeological potential in a regional context. The Macrosite criteria include: known archaeological sites, travel/transportation corridors, bedrock geology, ungulate range and solar aspect. Microsite criteria refer to factors that refine the shape, location and degree of individual "polygons" denoting particular classes of archaeological potential. These criteria include site-specific landform features such as terrace / fan, promontory, saddle, open shallow water, watercourse, relict watercourse, confluence, or watercourse node." [this is plagiarized from my Nelson Forest Region LU AOAs – why no citation? And given that this has	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1817	Archaeological and Cultural Heritage MP Section 3.2, Pg 17	Referencing	LDN/UFN Wayne Choquette		Jun 10, 2022	2	New	Comment	No	Assuming "CHMP" is the same document as ACHMP, this reads as if it's the primary "Management Plan" document. If so, why aren't responses to comments 1814 and 1816 being incorporated into it? Or does "CHMP" refer to a different document that combines the ACHMP and the CSRMP into one document? (a good idea, by the way, as it would assist in coherently defining "mitigation", eliminate redundancy, and limit the proliferation of stages and document categories outside of the purview of the BC Archaeological Impact Assessment Guidelines).	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1818	Archaeological and Cultural Heritage MP Section 2.3.2, Pg 15 Table 2	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Archaeological Cultural Sequence for the Fraser Plateau [This makes no sense – the Early, Middle and Late prehistoric period dates don't correspond at all e.g. Middle Prehistoric AD 1 - 1300 (ca. 7000 BP to ca. 3500 BP) and lumping the diagnostic artifacts together renders this useless for both internal and external comparative purposes. There should be 2 tables with appropriate references]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1818	Archaeological and Cultural Heritage MP Section 2.3.2, Pg 15 Table 2	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1819	Archaeological and Cultural Heritage MP Section 3.2 Pg 17	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Evaluation of Archaeological Resource Potential "For the purposes of this study, archaeological resource potential is defined as the capability of a landscape (or portion of a landscape) to have supported the kinds of past Carrier activities that would have resulted in the formation and preservation of archaeological remains." [this assumes that only the Carrier are represented in the archaeological record here; if a proper job had been done of summarizing the sequence instead of lumping it all into one table, it would be apparent that the sequence is more complicated]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1819	Archaeological and Cultural Heritage MP Section 3.2 Pg 17	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1820	Archaeological and Cultural Heritage MP Pg 18	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"A GIS-based archaeological potential model was developed for the Vanderhoof Forest District (Traces 1996c). The Archaeology Branch cautions users of all GIS-based archaeological potential models to use additional sources of information regarding project specific study areas (e.g., large-scale orthophotos, detailed design plans, satellite imagery, etc...), and expressly warns users not to use the Vanderhoof Forest District model for operational planning purposes. Traces GIS-based model explicitly does not cover lands within the Blackwater Mine Project footprint and only the lower elevation areas within the LSA are covered by this model (see Figure 2). In order to address this data-gap AMEC developed a simple GIS based model for the mid to upper elevation lands for the mine site [but it was just said that the Archaeology Branch cautions users of all GIS-based archaeological potential models to use additional sources of information regarding project specific study areas! And then there's just a "simple" one employed here!]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1820	Archaeological and Cultural Heritage MP Pg 18	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1821	Archaeological and Cultural Heritage MP Pg 22	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	" variety of site types including … a quarry (n=1) have been identified within the Mine Site RSA and Transmission Line RSA. [given the importance of quarries re the distribution of quantities of stone artifacts, this should have been emphasized more – what's the site number? This doesn't even specify which RSA it's in!]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1821	Archaeological and Cultural Heritage MP Pg 22	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1822	Archaeological and Cultural Heritage MP	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"in order to address this discrepancy a simple archaeological potential GIS model was developed for the Mine Site LSA and RSA. For the purposes of this AOA, lands for the middle and upper elevation LSA, were not assigned either a moderate or high potential rating but rather represented as just "archaeological potential". This was due to the lack of archaeological data for these elevations for this region which do not allow for further refinement of the model at this time. Table 4 provides a summary of the buffers used for the archaeological potential model." [they just buffered watercourses and standing water by BEC variant with no explanation for the variations in buffers other than the unsupported statements based on flyovers] "it was observed that archaeological potential could be closely associated with specific biogeoclimatic zones. Generally speaking the upper sub-alpine and alpine zones have moderate to high archaeological potential especially near the tarns and/or headwaters and upper reaches of numerous drainages." [based on what specifically? The only criteria identified is water] "… Archaeological potential increases as elevation decreases. Again lands in association with wetlands, ponds, lakes and drainages have moderate to high potential, especially for level terrain that is well drained. In addition, the presence of lodgepole pine has potential for CMTs." [For example, the bias against the upper elevation forests does not appear to take caribou into consideration even though it was previously stated that there was "evidence" of caribou, plus no factoring in of fluctuations in BEC zone boundaries or ecology over time. Although their "model" is just the most basic 'level ground near water', there has been no discussion of palaeohydrology and therefore no apparent control for variability in locations of water]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing

1822	Archaeological and Cultural Heritage MP	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1823	Archaeological and Cultural Heritage MP Section 4.3, Pg 27	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"That a GIS model of archaeological resource potential for the New Gold Blackwater Gold Project be developed and refined when LIDAR is available. That this AOA is to be used only as a preliminary assessment of archaeological site potential. Comparisons between the output of AMEC model and the results of the field assessment component of the AIA for the proposed Project should be made." [was this ever done? There is no subsequent discussion of this in any documents]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1823	Archaeological and Cultural Heritage MP Section 4.3, Pg 27	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1824	Archaeological and Cultural Heritage MP Section 1.1, Pg 1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"The proponent is proposing the development of an open pit gold mine south of Vanderhoof on Blackwater Mountain." [but the mine is identified in project components as: a 3,300-ha mine site situated on the northern flanks of Mt. Davidson. Which is it? It's not even named on any of the report maps]	Noted - the comment appears to reference AMEC Environment & Infrastructure. 2011. Archaeological Overview Assessment New Gold Inc. Blackwater Gold Project. Report prepared for New Gold Inc. and on file with New Gold Inc., Vancouver, B.C. and AMEC Environment & Infrastructure, Burnaby, B.C. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1824	Archaeological and Cultural Heritage MP Section 1.1, Pg 1	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1825	Archaeological and Cultural Heritage MP Section 2.5, Pg 5	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Evaluation of Archaeological Potential [the two paragraphs of plagiarized text in the AOA have been deleted but the paragraph about the Arch Branch' cautions and warnings re using GIS models and then stating that they have developed one anyway is still there, although "model" is an overstatement, it's just using a GIS to map buffers around existing water]	Noted - the comment appears to reference the Permit Report for 2012-0295. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1825	Archaeological and Cultural Heritage MP Section 2.5, Pg 5	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1826	Archaeological and Cultural Heritage MP Section 3.3, Table 3	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	Archaeological Cultural Sequence for the Fraser Plateau [uses the same boilerplate text and the same contradictory and relatively useless table as the AOA. Didn't anybody critically review that?]	Noted - the comment appears to reference Permit Report for 2012-0295. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1826	Archaeological and Cultural Heritage MP Section 3.3, Table 3	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1827	Archaeological and Cultural Heritage MP Section 4.1, Pg 17	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	"The AIA, conducted under Permit 2012-0295, focused on places identified as having high or moderate archaeological potential in the AOA (Amec, 2011), and typically included lands in proximity to aquatic features, including the Stellako River and Davidson Creek, and adjacent to other streams and waterbodies." [Figure 2-10 shows much localized M and H potential on the north side of the Nechako River but only 1 subsurface test location (MO06); Figure 2-12 shows much M and H potential on both sides of the Nechako River but only 1 subsurface test location on each side, both immediately adjacent to the river, not on any higher terraces, if they were present?] Figures 2-44, 45 [show no archaeological potential or survey coverage in the alpine zone atop Mt Davidson, which despite there not being tarns still has elevated open ridge crests that would have provided vantage points, especially given the identified cultural significance of the mountain - and it looks like machinery has been up there]	Noted - the comment appears to reference Permit Report for 2012-0295. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1827	Archaeological and Cultural Heritage MP Section 4.1, Pg 17	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing

1828	Archaeological and Cultural Heritage MP Pg 29, Table 8	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	S 5.1 Scientific significance There are six criteria used to assess scientific significance including: 1) uniqueness, 2) ability to extract a date for modification, 3) quantity and variety of archaeological resources; 4) chronological sensitivity; 5) further study and sampling experiments; and, 6) intra-site spatial analysis [what is the methodology for scoring and defining the thresholds? E.g. there obviously aren't a lot of sites on the north slope of Mt Davidson and it looks like most of them are in the mine site and most if not all seem to have been undisturbed – it must be assumed that the maximum score is 5 but these sites all scored at the lowest end of the scale . What's the reference point for "uniqueness"? and site integrity wasn't an assessment criterion for some reason]	Noted - the comment appears to reference Permit Report for 2012-0295. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1828	Archaeological and Cultural Heritage MP Pg 29, Table 8	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1829	Archaeological and Cultural Heritage MP Section 6, Pg 34	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	IMPACT ASSESSMENT "Any impacts to recorded archaeological sites can be mitigated through monitoring and data collection under a Section 12 Site Alteration Permit, in consultation with First Nations communities and taking into consideration their community cultural heritage policies" [why no mention of this in ACHRMP or CSRMP?]	Noted - the comment appears to reference Permit Report for 2012-0295. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1829	Archaeological and Cultural Heritage MP Section 6, Pg 34	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1830	Archaeological and Cultural Heritage MP Section 7, Pg 36	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jul 22, 2022	2	Follow up	Comment	No	See comment 1817.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
1830	Archaeological and Cultural Heritage MP Section 7, Pg 36	Descriptive Information/Definitions	LDN/UFN Wayne Choquette		Jun 10, 2022	1	New		No	RECOMMENDATIONS "3. Avoidance of the sites through redesign and/or construction planning (monitoring) is recommended. If avoidance is not possible, an archaeological Site Alteration Permit (SAP) pursuant to Section 12 of the HCA may be required." [is this just a polite way of saying the site is disposable?] "4. Due to the assessed likelihood and severity of potential project impacts if avoidance is not possible, an archaeological SAP is recommended for sites within the mine site footprint (FhSe-73, -74, and FhSf-4), the freshwater supply pipeline footprint (FhSe-43), and fish compensation site footprint (FhSf-6 -7, and -8)" [why was this not done or discussed in the ACHRMP or CSRMP?]	Noted - the comment appears to reference Permit Report for 2012-0295. The CHMP reflects current and proposed measures and clarification for past reports authored by others are not warranted. The issues raised do not change the mitigation measures proposed in the Management Plan.	No	LDN/UFN	ERM		Daniel Walker	RT	Ready for Submission	RT; June 18	Ready for Publishing
1831	Chapter 4 Section 4.1		LDN/UFN Okane		Jun 10, 2022	1	New		No	Is the self-sustaining vegetation planned for the site meant to be representative of the current vegetation on-site or to reflect vegetation that is likely to persist following impacts of climate change.	As stated in end land use objective: "Self-sustaining vegetation that will progress to plant communities comparable to pre-disturbance ecosystems as supported by the results of the ecohydrological modelling." The post-mine land capability was estimated based on the available water storage capacity of reclamation materials, post-closure topography and climatic information. BW Gold acknowledges that creation of the ecological and floristic diversity may be challenging to achieve self-sustaining ecosystems in all areas disturbed by mine activities. Thus, targeted approaches for the Upper and Lower waste stockpiles, dam slopes, roads and infrastructure pads will be completed to achieve this objective (see Section 4.1.4 of Chapter 4).	RT/TD to review	LDN/UFN	ERM		Rolf - Peter	RT	Ready for Submission	RT: June 26	Ready for Publishing
1831	Chapter 4 Section 4.1		LDN/UFN Okane		Jun 10, 2022	2	New		No	Please provide documentation for how the self-sustaining vegetation is expected to persist through the impacts of climate change on the site.	Self-sustaining vegetation is an end land use objective and its achievement is dependent on the stability of supporting conditions as described in the ecohydrological modelling as noted; including post-closure topography, reclamation materials and their available water storage capacity. Climate change may alter some of these conditions leading to less favourable conditions for some vegetation and more favourable conditions for other vegetation, hence ecosystem composition may change with time. The Vegetation Management Plan Table 11.1 lists a Trigger-Action-Response approach to revegation which will be implemented, and adapted as vegetation is monitored.		LDN/UFN	ERM		Rolf - Peter	RT	Ready for ERM Review	AT, Aug 11	Ready for Publishing
1832	Chapter 4 4.1.2.2		LDN/UFN Okane		Jun 10, 2022	1	New		No	It is not clear if this modelling was completed to include climate change, or just soil evolution between closure and post-closure	Modelling in this case does not explicitly include climate change, but climate-change considerations for reclamation planning are discussed in Section 4.1.4.1, which includes the commitment to explicitly include climate-change projections in updates to the ecohydrological modelling.	No	LDN/UFN	IEG		Justin Straker (IEG)	TD	Ready for Submission	RT; June 18	Ready for Publishing
1833	Chapter 4 4.1.2.2		LDN/UFN Okane		Jun 10, 2022	1	New		No	Is the construction of wetlands considered feasible for this work? Self-sustaining man made wetlands are challenging to establish.	When identifying mitigation measures, BW Gold has selected wetland restoration over wetland enhancement and wetland enhancement over wetland creation. Wetland creation will only be undertaken as a last step in the mitigation hierarchy, pursuant to condition 5.3, "the Proponent shall establish, prior to wetland creation and in consultation with Indigenous groups, Environment and Climate Change Canada and other relevant authorities, performance standards for wetland functions."	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1834	Chapter 4 Table 4.1-3		LDN/UFN Okane		May 05, 2022	1	New		No	Whitebark pine is a protected species but is not anticipated to be present post-mining based on the soil moisture regime. How will this be accounted for in the closure plan?	Whitebark pine will be planted during reclamation on sites where reclamation cover depths and materials have been specifically designed to create xeric to submesic soil moisture regimes (02 and 03 site series in the ESSFmv1; please see Table 4.2-7). Whitebark pine will also be used to reclaim exploration roads in the ESSFmvp. Additional reclamation research trials will be conducted during the Operation Phase to evaluate establishment success of whitebark pine on xeric to submesic edaphic conditions on the reclaimed areas in the ESSFmv1. Should the initial reclamation research trials fail to establish whitebark pine, BW Gold will follow the adaptive management approach and update the methods of seed collection, propagation and testing to produce viable plantings. BW Gold has begun monitoring the cone crop in 2022 to provide sufficient time to gather further seeds if the first batch of seeds fails. At this time, an off-site offsetting is not planned.	RT/TD to review	LDN/UFN	ERM		Justin Straker (IEG)	RT	Ready for Submission	RT: June 28	Ready for Publishing
1835	Chapter 4 Figure 4.1-3		LDN/UFN Okane		May 05, 2022	1	New		No	The post-mine capability includes substantially more surface water than pre-mining. Open water does not perform the same way as wetlands. Further effort should be made to reduce the amount of open water at closure as part of meeting equivalent land capability.	BW Gold acknowledges this comment and will consider options for reducing the proportion of open water. Open water is primarily located in the open pit and TSFs, and opportunities may exist for reducing pond sizes in TSF C and D. As noted in Section 4.7.4.1 (Design and Construction), "Tailings will be deposited strategically in TSF C and TSF D to create the final pond configuration. Mapped TSF pond locations in Figure 3.3-15 in Chapter 3, Mine Plan are approximate based on current water-balance and hydrology modelling."	RT/TD to review	LDN/UFN	ERM		Justin Straker (IEG)	RT	Ready for Submission	RT; June 27	Ready for Publishing
1836	Chapter 4 4.1.2.3		LDN/UFN Okane		May 05, 2022	1	New		No	Over half of the SBSmc3 post-disturbance is non-reclaimed roads, infrastructure and water features, or dams that cannot be reclaimed. Unclear how this can still be counted as equivalent land based on ecosystem type.	While we note the Code only requires equivalent land capability excluding lands that are not to be reclaimed, BW Gold is committed to maximizing the habitat value of the referenced features, where possible. For example, diversion channels may provide aquatic habitats or drinking water sources for wildlife; open walls may serve as habitat for certain bird species. BW Gold is also committed to reclaiming any areas that will be used post-closure but not in perpetuity and maintenance, e.g., roads, water treatment infrastructure.	RT/TD to review	LDN/UFN	ERM		Justin Straker (IEG)	RT	Ready for Submission	rt; June 27	Ready for Publishing
1837	Chapter 4 4.1.2.3		LDN/UFN Okane		May 05, 2022	1	New		No	Wetlands have 4 different classifications. Replacing some/all wetland areas with bogs is not necessarily the most appropriate use of land for reclamation.	We searched for "bog" in the referenced section and are unclear what text this comment is referring to. We acknowledge that wetlands are diverse ecosystems with distinct classifications. Reclamation and offsetting efforts (see response to the next comment, 1838) will consider this. Bogs, swamps, fens and marshes have been tracked separately in the pre-mine capability assessment to enable this.	RT/TD to review	LDN/UFN	ERM		Justin Straker (IEG)	RT	Ready for Submission	rt; June 27	Ready for Publishing

1838	Chapter 4 4.1.1.1		LDN/UFN Okane		May 09, 2022	1	New		No	Post-mine Land Capability missing letting m in mine in last sentence of 1st paragraph.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1839	Chapter 4 4.1.2.3 p15. ESSFmv1		LDN/UFN Okane		May 09, 2022	1	New		No	Sweeping statement that "All wetlands will be lost" There is no well-defined reason to why this is the case. Some mention that post site conditions will be drier, potentially climate change will make it drier. But there's 107Ha of swamp there presently and precipitation is defined to increase with climate change	This is based on the results of the ecohydrological model, which works on the assumption that seepage inputs to the rooting zone will be lost due to changes in substrate and topography (e.g., not possible on mine-rock in the waste stockpiles)--see excerpt below. As mentioned multiple times throughout (see example excerpt below), BW Gold will seek to reclaim low-lying and wetland ecosystems opportunistically, where conditions are appropriate as part of the research and reclamation program. As described in 4.1.2.3 (Summary of Changes to Landscape Capability): "The decrease in available soil moisture results from the model assumption that water inputs will be primarily from precipitation on reclaimed landforms, without significant areas receiving near-surface, rooting-zone seepage inputs from local upslope areas. This will result in the loss or decrease in prominence from the disturbance footprint of site series that have subhygric and wetter SMRs (i.e.., wet forests and non-forested wetlands reliant on input of shallow groundwater). The Wetland Management and Offsetting Plan (WMOP) (Section 4.2.7.3, Wetland Management and Offsetting Plan) provides details on addressing wetland losses—the WMOP will evolve over the mine life as opportunities for wetland creation are identified through improved understanding of site	RT/TD to review	LDN/UFN	ERM		Justin Straker (IEG)	RT	Ready for Submission	RT; June 27	Ready for Publishing
1840	Chapter 4 4.2.6.2 p79		LDN/UFN Okane		May 09, 2022	1	New		No	Ongoing monitoring of soils is minimal even though the vegetation and growth profile is completely dependent on the SMR? Is there a monitoring plan to ensure that the soil will support the growth of the White bark pine trees?	SMR is a relatively static soil property, as it is based on particle-size distribution (texture, coarse-fragment content), location and topography (slope, aspect and slope position), which do not change over time. Accumulation of organic matter can increase water-holding capacity, although not in a way that is typically substantial enough to have a material effect on SMR. Decadal sampling of organic matter and soil nutrients is, however, planned to account for properties that change over time (see Section 4.2.6.2, Permanent Sample Plots).	No	LDN/UFN	IEG		Greg	RT	Ready for Submission	RT; June 27	Ready for Publishing
1841	Chapter 4 4.13-1 p101		LDN/UFN Okane		May 09, 2022	1	New		No	BMP In the first line is not defined anywhere in this document, please include in acronym list	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1842	Chapter 4-App A 5.1.1.2 p8-9		LDN/UFN Okane		May 09, 2022	1	New		No	States long term exceedance of cadmium, zinc and mercury in all months modelled. No acknowledgement to the consequences of this fact?	BW Gold acknowledges there were some exceedances of parameters during Closure and Post Closure. BW Gold has updated its Closure and Post Closure water quality management and treatment plan to optimize its water quality modelling predictions during these periods as presented to the MRC on June 15. These results will be provided with our round 1 responses and should be considered base case going forward.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 26	Ready for Publishing
1843	Chapter 4-App A 5.1.3.4 p23		LDN/UFN Okane		May 09, 2022	1	New		No	Last sentence of this paragraph is a run on sentence; also the word consider in this sentence should be "considered".	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1844	Chapter 4 App J		LDN/UFN Okane		May 09, 2022	1	New		No	No mention of the Membrane liner that may/may not be needed in other instances of the closure plan.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM			RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1845	Chapter 4 4.1.4.1		LDN/UFN Okane		May 11, 2022	1	New		No	The projected BGC unit distributions were not used, since the current units were perceived as having a clearer assessment of changes due to mining activity. However, reclamation and closure will not be completed until 2050, making those projected BGC units the most relevant to the returning land use, not the comparison to BGC units under the current environmental regime.	As is noted in the comment: "This option was chosen as it provides a clearer assessment of changes to current land capability due to mining activities and reclamation practices." Furthermore, " This is not considered to be a risk to the validity of the ecohydrological modelling, as the primary outputs from the model are related to relative SMR, which is strictly derived from site and soil characteristics and is explicitly defined as independent of climate."	No	LDN/UFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
1846	Chapter 4 4.2.1.2		LDN/UFN Okane		May 11, 2022	1	New		No	Has any work been done to optimize the reclamation material on-site to ensure that there is not a deficit of material? How were reclamation material thicknesses determined.	4.2.1.2 describes how a conservative estimate was used in calculating reclamation material: "The volume demand estimate for reclamation material is conservative (i.e.., affords extra soil). In ecohydrological modelling, predicted SMR classes are downgraded (i.e.., made drier) by a quarter class, increasing calculations of required soil depths, which are then rounded up to the next 10-cm increment (e.g., 52 cm is rounded to 60 cm). These adjustments in the modelling process are incorporated to ensure conservatism in reclamation materials demand-side estimates (i.e.., to ensure that adequate volumes of reclamation materials are salvaged and stored for use in reclamation, and that requirements are not underestimated)."	RT/TD to review	LDN/UFN	ERM		Rolf	RT	Ready for Submission	RT; June 27	Ready for Publishing
1847	Chapter 4 4.2.2 First Bullet		LDN/UFN Okane		May 11, 2022	1	New		No	Remove second comma in the first sentence for clarity	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1848	Chapter 4 4.2.2 First Bullet		LDN/UFN Okane		May 11, 2022	1	New		No	Will the water level in the Open Pit only be maintained below spill elevation until the end of operations? In closure, is it expected to naturally decant?	The post-closure water management plan includes active control of the open pit water level for the long-term following closure.	RT/TD to review	LDN/UFN	KP		Cindy	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1849	Chapter 4 4.2.2.1		LDN/UFN Okane		May 11, 2022	1	New		No	Any reason why the waste stockpiles cannot be backfilled into the mined out pit to reduce material left on-site, even if it is geomorphically acceptable? Integrating closure into the mine plan in the form of staged backfill of waste rock into the pit would remove a pit lake from the post-closure landscape, which may be beneficial given the lack of large open water bodies in the pre-disturbance condition on-site	The current pit development plan does not allow for backfilling while the pit is in operations. The phased pit development, or pit wall pushbacks, are targeting consecutively deeper resources towards the bottom of the open pit limits. During operations, should backfilling opportunities arise that do not impact future resource development, they will be exploited in order to reduce surface footprint impacts and reduce the cost of mining operations.	RT/TD to review	LDN/UFN	BWG	MMTS	Marc S	AT/KP	Ready for submission	KP, June 29	Ready for Publishing
1850	Chapter 4 4.2.2.2		LDN/UFN Okane		May 11, 2022	1	New		No	Fourth bullet uses "As well" twice in the same sentence. Suggest removing one for clarity	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1851	Chapter 4 4.2.2.3		LDN/UFN Okane		May 12, 2022	1	New		No	re: seed mix - add a space between 71% and 26 so that it is clear 26 is the variety of slender wheatgrass	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 17	Ready for Publishing
1852	Chapter 4 4.2.2.4		LDN/UFN Okane		May 12, 2022	1	New		No	Is the LGO stockpile pad being left in place at closure? There are drains conveying natural flows, but it might be worth considering removal of the pad once the LGO is processed.	By the end of mine life, the LGO stockpile will be milled, fully exhausting all remaining ore, and its footprint will require reclamation. The liner beneath the stockpile components will be removed and disposed of in accordance with Section 4.5, Disposal of Chemicals, Reagents, Hazardous Materials, and Contaminated Materials. OVB underlying the liner will be tested for contamination in accordance with Section 4.3, Trace Element Uptake in Soils and Vegetation and Section 4.4, Contaminated Sites and Human Health and Ecological Risk Assessment and any necessary disposal of contaminated material will be done as per Section 4.5, Disposal of Chemicals, Reagents, Hazardous Materials, and Contaminated Materials. The site will be covered in 50 cm of glaciofluvial surface soil and is expected to support the ESSFmv1-02 site series (117 ha), which is lichen-rich, open-forest caribou habitat, and ESSFmv1-03 (6 ha).	No	LDN/UFN	ERM			RT	Ready for Submission	RT; June 26	Ready for Publishing

1853	Chapter 4 4.2.2.4		LDN/UFN Okane		May 12, 2022	1	New		No	There is a substantial amount of active water management occurring as part of closure, and active treatment extends into post-closure. Have alternatives been explored to reduce or eliminate the need for active management of water? This will keep personnel at Blackwater for a prolonged period, which introduces risk.	Since the Application, BW Gold Ltd. and their consultants have revised the site-wide water balance model and the site-wide water quality model with a focus on mitigating Project changes for the Closure and Post-closure phases. Updated water quality predictions that reflected optimized water management and quality were presented to EMLI, ENV and First Nations on June 15, 2022, and are summarized in Lorax (2022), as part of BW Gold Ltd. (2022). Those documents demonstrate Project-influenced parameters that were previously predicted to exceed their BC WQGs in Closure and Post-Closure (Application version 12b) in the receiving environment are no longer	No	LDN/UFN	Lorax		Meghan	GM		GM; June 29	Ready for Publishing
1853	Chapter 4 4.2.2.4		LDN/UFN Okane		May 12, 2022	2	New		Yes	Okane received and reviewed the referenced attachment on July 19 2022, however, Okane has not been provided with the revised base case closure report and therefore cannot comment on this response. Carry forward to Round 3.	This comment is acknowledged. It is our understanding that BW Gold Ltd. has resent the document being referenced. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 4	Ready for Publishing
1854	Chapter 4 4.2.3.1		LDN/UFN Okane		May 12, 2022	1	New		No	The membrane treatment plant (to be operated in closure / post-closure) is anticipated to foul if there are wetlands established on the TSF, which is part of the closure plan. There seems to be a disconnect in what will be done. There is also limited proof of success establishing man-made wetlands. Ideally, wetlands should provide some treatment capacity, and the treatment plant should be removed at closure. Primarily, these two items are working in opposition to each other while both being in the RCP, and clarity needs to be provided around which direction the project will go.	We respectfully note that establishing wetlands on the TSF is not part of the closure plan. Per Application Section 4.2.3.1: "If successful wetland reclamation strategies are possible through the proposed reclamation research (Section 4.2.5.1, Vegetation and Cover Trials) and are further supported as potential wetland restoration sites supported by favorable water quality monitoring results, then reclamation prescriptions for these areas [i.e.., the TSF and in the vicinity of the ECD and FWR] will be revised, provided there is no interference with higher-priority water management goals".	RT/TD to review	LDN/UFN	Lorax		Alan	GM		GM; June 29	Ready for Publishing
1855	Chapter 4 Table 4.2-2		LDN/UFN Okane		May 12, 2022	1	New		No	The sum for the TSF beaches is unclear. Both 30 and 70 cm of OVB are indicated for the TSF beach area, whereas elsewhere it is indicated that the total cover thickness is 100 cm	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	ERM		Rolf	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1855	Chapter 4 Table 4.2-2		LDN/UFN Okane		May 12, 2022	2	New		No	Please provide documentation clarifying this discrepancy.	The TSF beach material type and thicknesses are explained in Table 4.2-2 with the intended purpose to meet the geochemical barrier, soil mosture regime, stability, and growth media requirements. Thus the application (composite of material types and thickness) could vary (for example across the beach profile) to meet the requirements. Additional research is committed to further understand the optimum approach to TSF beach cover design.		LDN/UFN	ERM		Rolf		Ready for Submission	AT, Aug 09	Ready for Publishing
1856	Chapter 4 4.2.5.3		LDN/UFN Okane		May 15, 2022	1	New		No	How are progressive wetland trials anticipated to perform in TSF C given waste rock will be actively contributed to the area? Are trials anticipated to begin only after waste rock placement in TSF C is complete? Please clarify.	Chapter 4 (Section 4.2.5.3) states that "field trials can commence within the first three years of operation in suitable area(s) identified within TSF C and/or upstream of the ECD." A location within TSF C that would not be covered with tailings and/or waste rock for several years is shown on Figure 4.2-6. The ideal location, however, would be one that could remain for the life of the project, so ongoing learning from the wetland trial can continue for decades. Such an area exists downstream of the maximum footprint of Main Dam D, but upstream of the ECD pond. An area could be prepared to grow a trial wetland and water that matches the predicted characteristics of the TSF pond in closure/post-closure can be directed into this wetland trial for an excellent on-site reclamation research program.	RT/TD to review	LDN/UFN	KP	ERM	Greg	RT	Ready for Submission	RT; June 27	Ready for Publishing
1857	Chapter 4 4.2.5.4		LDN/UFN Okane		May 15, 2022	1	New		No	PCOC is defined previously and doesn't need to be re-defined.	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
1858	Chapter 4 4.2.5.4		LDN/UFN Okane		May 15, 2022	1	New		No	Pit Lake field trials are not anticipated to begin until the post-closure period, at which point there is little room for adaptive management of the closure strategy. Consider incorporating alternate trials to achieve proof of concept earlier in the project lifecycle.	Please refer to comment response 1346.	No	LDN/UFN	Lorax			GM		GM; June 29	Ready for Publishing
1859	Chapter 4 Appendix 4-J		LDN/UFN Okane		May 15, 2022	1	New		No	Has processing the LGO already stockpiled during temp shut down been considered?	Processing of LGO stockpile has been considered. The cost implications of processing the Low Grade would be considered prior to shut down. Limited waste mining would need to be continued to generate construction material for the TSF expansion to accommodate the LGO that is processed.	No	LDN/UFN	BWG			TD	Ready for submission	AT/KP, June 29	Ready for Publishing
1860	Chapter 4 Appendix 4-J		LDN/UFN Okane		May 15, 2022	1	New		No	Can you confirm that allowing the pond elevation to be slightly more than the crest elevation of TSF C is such that water does not spill down the face of TSF C but saturates the crest of the embankment? It is unnerving to read that the elevation will be managed at higher than the embankment height.	The language in the report describes that the pond elevation will be slightly above the crest elevation of the PAG/NAG3 waste rock dump, not the dam crest. The pond elevation will be well below the dam crest and maintained within a target range providing sufficient freeboard for dam safety purposes.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1861	Chapter 4 Section 4.4		LDN/UFN Okane		Jun 03, 2022	1	New		No	Progressive reclamation is noted for Lower Stockpile (Y+11) and Upper Stockpile (Y+19), is it anticipated that 100% of the stockpiles are available for reclamation at that time. If not, what's the expected available area for reclamation during the operations period.	To clarify, as stated in the Reclamation and Closure Plan (RCP; Chapter 4, Section 4.2.4), the Lower Waste Stockpile will be completed in in Year +11. However, this overburden (OVB) material is earmarked for reclamation purposes, and therefore the stockpile will not be progressively reclaimed. With the Upper Waste Stockpile anticipated to be available within five years of Closure (at Year +19), there may be additional opportunities in other areas for progressive reclamation during operations. As stated in Section 4.2.4 of Chapter 4, pit haul roads and the explosives storage facilities will also be available for progressive reclamation at Year +19. BW Gold will update the RCP in subsequent iterations when the available areas are identified.	No	LDN/UFN	ERM	IEG	Rolf	AT/KP	Ready for Submission	RT; June 29	Ready for Publishing
1862	Chapter 4 4.7.1		LDN/UFN Okane		Jun 03, 2022	1	New		No	The section notes that a sigmoidal, rather than planar, slope is proposed for the stockpile slope, which is acceptable. The text notes that this configuration will 'help reduce erosion'. It is suggested that the emergence of vegetation and texture of the cover material will have the biggest influence on erosion, rather than slope configuration which is relatively steep be it a planar or sigmoidal slope	BW Gold agrees with the reviewer comment, and notes that material particle-size distribution, establishment of vegetation and slope length and gradient will all affect erosion.	No	LDN/UFN	ERM	MMTS		RT	Ready for Submission	RT; June 27	Ready for Publishing
1863	Chapter 4 4.7.3.1		LDN/UFN Okane		Jun 03, 2022	1	New		No	"Tailings will be deposited strategically in TSF C and TSF D to create the final pond configuration. Specifically, the final years of tailings will be distributed in a manner to ensure the ponds are located adjacent to the spillways" This seems like the correct approach, can you comment on the likelihood of being able to execute this given the dam configurations and the chosen method of decant recovery, or provide technical challenges that could impact the ability to achieve this.	It can be achieved with appropriate planning and sufficient time to optimize the beach configuration. Challenges that could impact success primarily relate to timely planning and execution.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1863	Chapter 4 4.7.3.1		LDN/UFN Okane		Jul 22, 2022	2	Follow Up	Information Requirement	No	provide documentation of appropriate planning or plans to execute a plan, including mitigation strategies.	Refer to responses to comments 831 and 832.		LDN/UFN	BWG		Travis	TD	Ready for Submission	TD; Aug 11	Ready for Publishing
1863	Chapter 4.4.7.3.1		LDN/UFN Okane		25-Aug-22	3	Follow up		No	Comments 831 and 832 do not refer to or address developing tailings deposition or a clear path to developing appropriate plans. Please provide documentation of appropriate planning or plans to execute a plan, including mitigation strategies.	It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
1864	Chapter 4 4.7.4.1		LDN/UFN Okane		Jun 03, 2022	1	New		No	Strategy is to pump water to the Open pit and Pit will fill in 27 years. Is it expected active pumping will occur for all 27 years? What is the implications to water quality and pit filling time if strategy moves to passive pit filling?	Water management during the Closure phase, including active pumping of water to the pit, is optimized to accelerate pit filling. Accelerated pit filling is desirable from a water quality perspective as it will limit the period allowed for pit wall oxidation. Active pumping is planned for the entire Closure period. It is noted that results of the updated water balance modelling for the optimized Closure/Post-Closure water management strategy (refer to BW Gold (2022) submitted with Round 1 responses) suggest the pit lake will reach its target elevation after approximately 20 years of filling (7 years earlier than the earlier water management strategy presented in the Application). A passive pit filling strategy would increase the amount of time required to fill the pit. This approach would prolong the period of pit wall oxidation and is expected to result in higher metals concentrations in pit lake water. Reference: BW Gold Ltd. 2022. Revised Base Case Closure and Post-Closure WQ Predictions. Prepared for ENV and EMLI. June 30, 2022.	RT/TD to review	LDN/UFN	Lorax	KP	Cindy/Meghan	AT/KP	Ready for Submission	GM; June 28	Ready for Publishing
1864	Chapter 4 4.7.4.1		LDN/UFN Okane		Jun 03, 2022	2	Follow up	Information Requirement	Yes	Okane has not been provided with the referenced report (BW, 2022) and therefore cannot comment on or resolve this response. Carry forward to Round 3,	This comment is acknowledged. It is our understanding that BW Gold Ltd. has resent the document being referenced. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 4	Ready for Publishing

1865	Appendix 4-J 4.7.7.1		LDN/UFN Okane		Jun 03, 2022	1	New		No	How will the planned flooding of WR during temporary shutdown impact the water levels and location of water cover in the TSF, will there be sufficient beach to prevent ponding against the dams? Is there any conflicts between saturating the WR and maintaining a safe water cover?	The influence of flooding during a temporary shutdown will be highly dependent on the relative elevations of the dams, waste rock disposal area(s), tailings beaches and pond(s) if a temporary shutdown is initiated. Dam safety criteria (e.g. sufficient freeboard for flood management) will limit the maximum allowable water elevation in the facility during temporary closure and adjustments may need to be made to plans, depending on site specific conditions if shutdown were to occur. The actions to manage the TSF during temporary shutdown described in Appendix 4-J and summarized therein in Table 4.4-2 are reasonable and appropriate to manage the potential for conflicts between geochemical and geotechnical objectives during temporary shutdown.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1866	Appendix 4-J 4.4		LDN/UFN Okane		Jun 03, 2022	1	New		No	Table 4.4-2. There is a plan to have a Geochem Professional evaluate the tailings beach and then make appropriate plan for tailings beach management. Is it reasonable to assume that the tailings will be PAG and plan accordingly? It seems more appropriate to have a plan for PAG tailings and then adapt.	See response to comment 1865 above. There is a plan, but adjustments may need to be made to plans depending on site specific conditions if shutdown were to occur. The actions described in Table 4.4-2 include engagement of a geochemical professional as a means of limiting risk during a temporary shutdown.	RT/TD to review	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1867	MLARD 5.4.2	ML/ARD Management Plan	LDN/UFN Blake Weinrauch		Jun 01, 2022	1	New		No	Paragraph 2, Sentence 2. Provide clarification	Sentence should read "Cadmium and Zn were also found to be released at elevated concentrations even under neutral pH conditions". This will be updated in the next revision of the ML/ARD Management Plan.	No	LDN/UFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing
1868	MLARD 6.1.2	ML/ARD Management Plan	LDN/UFN Blake Weinrauch		Jun 01, 2022	1	New		No	How will the PAG overburden (that is in contact with the bedrock) be actively managed?	Management of overburden material that is either PAG and/or has a solid-phase Zn content ≥1,000 ppm will follow the same management protocols as for PAG or high ML waste rock (i.e.., storage within the TSF). The volume of overburden requiring active management is expected to be minor and limited to zones near the bedrock contact.	RT/TD to review	LDN/UFN	Lorax		Timo	GM	Ready for Submission	GM; June 24	Ready for Publishing
1869	MLARD 6.4	ML/ARD Management Plan	LDN/UFN Blake Weinrauch		Jun 01, 2022	1	New		No	This will inhibit further ML/ARD from forming, how will the existing ML/ARD that exists in the open pit due to acid generation from the pit walls be actively managed prior to pit filling?	Prior to pit filling, water collecting in the pit sump (i.e.., runoff and groundwater) will be dewatered to the Metals WTP and treated to target treatment limits before any discharge to the environment.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1870	MLARD 5.4.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	Please clarify why the ARD potential of tailings might be lower than ore.	The ARD potential of tailings might be lower than ore because some neutralization potential will be introduced in the form of lime during the milling process. The acid potential of the ore will remain unchanged through processing.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1871	MLARD 1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	In project overview would be good to mention tonnes of waste that will be produced over life of project also and how it will be managed briefly	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1871	MLARD 1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 22, 2022	2	New	Comment	No	Chapter 9 has been stated to be undergoing post-permitting updates. Please include an answer to this comment in the updated plan.	BW Gold wishes to clarify that Chapter 9 in its entirety is not being updated, however the plans comprising Chapter 9 may be updated based on comments received. BW Gold will make the requested edit to the ML/ARD Management Plan. As with other plan updates, BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	Lorax					RT/aug 29	Ready for Publishing
1872	MLARD 1.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Would the waste management plan also be referenced here?	The waste management plan does not cover mining wastes generated by ore extraction and processing. As such, a reference is not warranted in the ML/ARD Management Plan.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1873	MLARD 4.1.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Is there a good understanding of the mineralogy of the waste material so that calculation of NP using Ca assays can be confirmed as representative of available NP?	The NP estimate is based on an empirical correlation between wt.% Ca and modified NP. This equation has been developed using a large number of samples and is considered reliable. ML/ARD monitoring and the mineralogical sampling program will be used to update this relationship if necessary.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1873	MLARD 4.1.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 22, 2022	2	Follow Up	Information Requirement	No	What is the mineralogical sampling plan, as it is not referenced in the MLARD, and static testing during operations doesn't appear to include mineralogy.	Routine XRD analyses will be conducted on operational QA/QC samples as part of operational ML/ARD monitoring to confirm the validity of the NP proxy derivation. The ML/ARD Management Plan will be updated to reflect this change in the monitoring program.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1873	MLARD 4.1.1		LDN/UFN Lisa Axelson		30-Aug-22	3	follow up	information requirement	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	This comment is acknowledged.		LDN/UFN	Lorax				16-Sep	GM; Sept 16	Ready for Publishing
1874	MLARD 4.1.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Is it worthwhile mentioning effect of sphalerite on this calculation here	The presence of sphalerite in the deposit renders the calculated AP values conservative, since sphalerite does not generate acidity upon dissolution. Wording to that effect may be included in the next version of the ML/ARD Management Plan.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1874	MLARD 4.1.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1875	MLARD 4.1.3		LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Not using a sulfur cut-off initially for classification purposes may mean some low sulfur samples are classified as PAG due to low NP	Using the NPR to classify waste rock as PAG is considered appropriate and conservative. Incorporating a sulfur cut-off is not currently proposed and would be less conservative.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1875	MLARD 4.1.3		LDN/UFN Kirstine Malloch		Jul 22, 2022	2	Follow Up	Information Requirement	No	conservative classification of PAG has implications in material balance which may result in more PAG than planned for. Please provide documentation indicating this conservative classification does not result in more PAG than can be accomodated.	Please refer to the response provided for Round 2 Comment 1061.		LDN/UFN	Lorax					GM; Aug 11	Ready for Publishing
1876	MLARD 4.1.3 pg. 4-2		LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	What will be the percentage of PAG-2 Post-Closure - what does timeframe does 'during post-closure' refer to	Over the life of mine, PAG2 material will make up approximately 17% of all waste rock produced. Post-Closure begins when the pit reaches the final operating level. Post-Closure is considered to begin in Year +46. However, this may vary due to climate variability.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1877	MLARD 5.1.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Were the kinetic cells run representative of the range of sulfur grades in the PAG 1 and PAG 2 classifications - i.e... did low sulfur (<0.3% total S) PAG1 produce acidity	The range of total S for the PAG1 humidity cells was 0.2 to 2.1% and the range of total S for the PAG2 humidity cells was 0.07 to 0.7%. These ranges are considered representative of the expected Total S ranges for these waste rock classes. The PAG1 humidity cell with the lowest total S content (0.2%) became acidic after 11 weeks and reached a minimum pH of 3.63. The PAG2 humidity cell with the lowest total S content (0.07%) did not become acidic over the 85 weeks of testing. Additional information on the humidity cell characteristics is provided in Chapter 2.4 of the Application.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1877	MLARD 5.1.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1878	MLARD 5.1.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	How did NAG3 kinetic cells perform in terms of Zn mobilisation - no correlation here between classify NAG3 and Zn mobilisation	In general, the NAG3 Zn loading rates fell within the same range as the PAG2 Zn loading rates. The Zn loading rates were found to be strongly dependent on pH, with even a minor decline in pH leading to a significant acceleration in humidity cell loading rates. A further discussion of the correlation between pH, solid phase metal content and metal loading rates was included in Section 3.2.1.2 of the Source Term report (Appendix A.6 of Appendix 5-D of the Application).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1878	MLARD 5.1.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1879	MLARD 5.1.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Would the waste classifications change (percentages of total waste) if a sulfur cut-off was used for PAG material?	Incorporating a sulfur cut-off is not proposed and would be less conservative than using NPR to classify waste rock. As such, a re-calculation of the percentage of waste rock using a sulfur cut-off will not be completed at this time.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing

1879	MLARD 5.1.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 22, 2022	2	Follow Up	Information Requirement	No	conservative classification of PAG has implications in material balance which may result in more PAG than planned for. Please provide documentation indicating this conservative classification does not result in more PAG than can be accomodated.	Please refer to the response provided for Round 2 Comment 1061.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1880	MLARD 5.6.2	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	How does the material balance of the TSFs change if there is reduced / minimized sludge from lime treatment as a result of changing the LGO stockpile design?	With the current assumptions, the sludge materials generated from the Lime Neutralization System will constitute <0.05% of the total mass of tailings and waste rock. As such, changes to lime treatment are anticipated to have negligible impact on the material balance of the TSF and associated source terms.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1880	MLARD 5.6.2	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1881	MLARD 5.6.2	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	What is the influence of a change in material balance on the mine schedule?	A change in the material balance between PAG and NAG rock does not impact the mine schedule. However, this would require a change in material destination under the waste management plan. Sufficient flexibility exists to accommodate potential changes in material balance, PAG material can be deposited in the TSF, which has capacity to capture additional material. A contingency storage allowance is incorporated in the design basis of the TSF to proactively accommodate potential for increased waste quantities being PAG. The contingency storage allowance is approximately 1.3 Mm3 for Stage 1 and increases up to approximately 5 Mm3 for Stage 2. Thereafter, the staged design elevations for on-going construction of the TSF will be progressively updated as appropriate, based on the amounts tailings and waste rock deposited in prior years and projected for the following years with contingency allowances in consideration for the level of uncertainty in the waste production estimates.	No	LDN/UFN	BWG	KP	Klaus	GM		AT, June 29	Ready for Publishing
1881	MLARD 5.6.2	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1882	MLARD 6	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	Is there a plan for ML/ARD management in the event of catastrophic failure of any of the TSF Dam structures?	The ML/ARD Management Plan is meant to provide guidance for regular mine operations, per Section 9.5 of the Joint Application Information Requirements for *Mines Act* and *Environmental Management Act* Permits (BC ENV & BC EMLI, 2019), and does not discuss mitigations that would be required in the event of catastrophic dam failure. Further information on mine emergency response is presented in Application Appendix 9-J (Mine Emergency Response Plan).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1882	MLARD 6	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1883	MLARD 5.2.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Did the pH via lime addition test reduce amount of mobilized Se?	Se concentrations were low in all pH neutralization tests (0.0001-0.001 mg/L) and did not show a correlation with pH under the test conditions.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1883	MLARD 5.2.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1884	MLARD 5.3.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	First paragraph ... 'The proportion of the PAG wall rock that is acid **generating** is determine as a function of ....'	Thank you for noting this. BW Gold recognizes that the Application contains some editorial errors. We will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1884	MLARD 5.3.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1885	MLARD 5.3.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Would you not use the block model and assay data to determine the proportion of PAG wall deemed acid generating rather than lithology?	The block model was used to estimate the amount of PAG1, PAG2, NAG3, NAG4 and NAG5 on the pit wall. The proportion of acidic vs neutral PAG1 and PAG2 exposed on the pit wall is estimated based on lithology and exposure time. Lithology was shown to have a significant influence in determining lag time to ARD, with andesite showing longer lag times compared to fragmental and laminated volcanics. For example, after 6 months of exposure, 29% of PAG1 andesite and 77% of laminated and fragmental volcanics are estimated to be acidic and 8% of PAG2 andesite and 31% of laminated and fragmental volcanics are estimated to be acidic.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1885	MLARD 5.3.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1886	MLARD 5.5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Specify what lithology types comprise the overburden material	Overburden is considered a separate unit and is not generally represented by a specific waste rock lithology. While overburden may contain rock fragments from the different lithologies near the bedrock interface, the majority of overburden comprises glacial till, as well as colluvial sand and gravel.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1886	MLARD 5.5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1887	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	Lag times for ARD are up to one year (indicating they can be under one year). How does Artemis propose to ensure that the material is covered before ARD is produced? Minimum timelines are provided, but are not necessarily in conjunction with the ARD production times	It is anticipated that covering the fresh tailings within one year of tailings deposition will be sufficient to prevent the development of large-scale ARD from the unsaturated tailings beaches. Adjustments will be made to tailings lines and spigots to ensure that the tailings are covered within this timeline. Other contingency measures are outlined in section 7.2 of the ML/ARD Management Plan (Appendix 9-D) and would be triggered based on observations from the operational monitoring programs.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1887	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1888	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	What is the risk of ARD production before PAG waste is covered?	Kinetic test data have been analyzed extensively to develop a practical understanding of lag times to onset of ARD for the different material types. This understanding has been considered for ML/ARD management purposes in a conservative manner. Hence, the risk of net ARD from waste rock and tailings beaches within the TSF is considered low. Contingency measures are outlined in section 7.2 of the ML/ARD Management Plan (Appendix 9-D) and would be triggered based on observations from the operational monitoring programs. Potential for ARD formation to occur from PAG waste rock stored within the TMF impoundment prior to flooding has been incorporated into the geochemical source terms and water quality model.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing

1889	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	How does the risk of ARD production match the LDN/UFN risk framework?	The risk of MLARD production is addressed through several mitigations plans and strategies including: Chapter 9-D MLARD Management Plan Chapter 9-B Soil Management Plan Water treatment proposed in Chapter 3 and Chapter 5 These chapters and plans were reviewed during the pre-application phase of the application review process in alignment with established processes between BW Gold and UFN and LDN. This process provided LDN and UFN with an opportunity to review mitigations from their perspective and risk framework. This was also followed by a screening review process where LDN and UFN were able to review the same documents from a presence/absence perspective. Throughout both processes, BW Gold reviewed LDN and UFN comments on plans and chapters and provided responses to comments included where plans and chapters could be and were updated or provided a rationale for why and where comments did not result in updates to plans and chapters.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	TD, Jun 29	Ready for Publishing
1890	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	There is a risk that the TSFs beaches foul the water treatment plant. What is the contingency plan for closure of the tailings beaches in this case?	The WTP has a circuit for metals and TSS removal upstream of the membrane unit for protection against fouling. Furthermore, BW Gold will be dosing antiscalant to mitigate fouling on the membrane. Some fouling is expected over time, and for that, BW Gold will be performing regular CIP cleans to maintain performance.	RT/TD to review	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1890	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1891	MLARD 6.3	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	Drainage from the LGO stockpile can be minimized with improved construction techniques in alignment with the INAP Building Better Mine Rock Stockpiles guidance. Revise the plan as required.	The opportunity to leverage INAP "Building Better Mine Rock Stockpiles" was discussed with EMLI and Indigenous groups on Thursday June 17th, 2022. Several mitigation measures were discussed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. With respect to lift height, BW Gold acknowledges the opportunity to lower the lift height to reduce ML/ARD, but also notes there are both economic and physical limits that dictate the ultimate lift height selected. A review by BW Gold indicates dozing costs start to increase as the lift height is reduced below 5m and increase significantly below 3m. Further reduction in lift height is restricted by the physical characteristics of the run of mine rock. Lift heights of below 1m would be difficult to achieve, much less the 0.30m suggested in the meeting. These lift heights would also have significant cost implications and impact the economic viability of the stockpile. However, BW Gold will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BW Gold recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason, BW Gold has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners to ensure capture and treatment of both surface run-off and stockpile seepage. Further, bonding for the stockpile will be provided for as part of BW Gold's RLCE.	No	LDN/UFN	Lorax	BWG		GM	Ready for Submission	GM; June 17	Ready for Publishing
1892	MLARD 6.3	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	How much ARD is expected to be produced per ton of direct mill feed ore while it is stockpiled (<6 months)?	Ore stockpiles are assumed to become immediately acid generating for the purpose of ML/ARD Management.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1893	MLARD 6.4	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	What is the impact of sulfide oxidation of the pit walls prior to flooding?	Runoff from the pit wall will contribute sulphate and metal loads to the pit sump/pit lake. Prior to flooding, the pit sump water is directed to the Metals WTP. The reviewer is referred to Section 4.2.4 of the water balance and water quality model report (Appendix 5-D) for a summary of the open pit/pit lake water quality predictions.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1894	MLARD 7.1.2	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	Five samples per quarter of what?	Five run-of-mine tailings samples will be collected in each quarter of the year for operational monitoring purposes (i.e.., 20 samples over the year).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1895	MLARD 5.3.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Would be good to specify briefly metal leaching risk from material types exposed in pit walls rather than referring to sections	The comment is acknowledged. Section references were used to avoid duplication of information within the document.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1896	MLARD 5.3.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	What proportion/percentage of the 315Ha of walls will be PAG1, PAG2 etc…	The pit wall exposures as a function of elevation are presented in Table 5.3-1 of the ML/ARD Management Plan (Appendix 9-D). The proportions above the lowest bench elevation are 41% PAG1, 16% PAG2, 5% NAG3, 4% NAG4, 22% NAG5 and 12% overburden.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1896	MLARD 5.3.3		LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1897	MLARD 5.4.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Se was noted to be elevated in some ore samples (>30%), is Se elevated in tailings samples? It is not mentioned in Section 5.4.2.	Se was also elevated in the majority of tailings samples. However, it should be noted that Se has not been identified as a parameter of concern by water quality model results.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1897	MLARD 5.4.2		LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1898	MLARD 5.4.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Was Se mobilized in tailings kinetic tests?	Se was below the detection limit in the tailings humidity cell tests.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing

1898	MLARD 5.4.2		LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1899	MLARD 5.4.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	How does the PAG and NAG3 material fit in with the scheduling of tailings into the 2 dams.	Scheduling for tailings and waste rock management into TSF C and TSF D was integrated as part of planning and development of the designs. Please refer to the information presented in Appendix 3-K (TSF Life of Mine Design Report) for details on tailings and waste rock management planning.	No	LDN/UFN	KP		Dan	AT/KP	Ready for Submission	KP, June 27	Ready for Publishing
1900	MLARD 5.5.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	PAG overburden samples showed low total S values and were classified as PAG due to their low NP' - should the classification system be revised to include a total sulfur cut off limit?	Incorporating a sulfur cut-off is not proposed and is considered less conservative for low S materials than the current classification system using NPR.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1901	MLARD 5.5.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Baseline surface water monitoring report indicated some metal mobilisation closer to the deposit - is this not mobilised from overburden or is there exposed bedrock in the area.	It is often the case that elevated sulphate or metal concentrations are observed in baseline water quality monitoring surrounding mineral deposits. More recent monitoring data may also reflect overburden disturbances from exploration activities.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1902	MLARD 5.5.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Does the sorption studies imply that the TSF structures will not be lined and that there will be a reliance on in-situ foundation materials (weathered bedrock, basal till and sand and gravel units) to remove mobilized Cd and Zn from tailings leaching?	Low permeability cores in TSF dams and tailings beaches will limit the amount of seepage from the TSF. In addition, the ECD captures recoverable seepage and pumps it back to the TSF. Although the sorption studies indicated that >90% of Cd and Zn concentrations were attenuated by the weathered bedrock, basal till and sand and gravel units, sorption of Cd and Zn was not incorporated into the source terms for the water balance/water quality model. This adds conservatism to the predictions presented in the water balance and water quality model report (Appendix 5-D).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1902	MLARD 5.5.2		LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1903	MLARD 5.5.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Has a materials balance been calculated to ensure that there is enough suitable overburden for closure reclamation purposes or is the plan to reclaiming the stockpiles, assuming that this material is not mixed with NAG waste?	The reclamation materials balance is provided in Section 4.2.1.4 of the Reclamation and Closure Plan).	No	LDN/UFN	Lorax			GM		RT; June 29	Ready for Publishing
1904	MLARD 5.6	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Assuming that water treatment will be needed post-closure how will be sludge be managed, assuming that the TSFs will be reclaimed at that stage of the project and not available to receive sludge by-product	During Post-closure, sludge generated by water treatment could either be stored under water cover in the open pit or removed off-site to an appropriate waste facility.	No	LDN/UFN	BQE	BWG		GM		RT; June 29	Ready for Publishing
1904	MLARD 5.6	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	2	Follow Up	Information Requirement	No	Please update ML/ARD MP to include sludge management post-closure.	BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1905	MLARD 7.1.4	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jun 07, 2022	1	New		No	What is the plan for storage of WTP sludge while testing is taking place at an external laboratory?	A detailed characterization program for the sludge by-product will be initiated once this material becomes available, and further monitoring requirements may be recommended as a result of this program. Sludge will be directly discharged to the TSF during Operations, including during the time in early Operations that the detailed characterization program is occurring. Considering the minor amount of sludge discharge relative to the overall tailings mass (<0.5%) the risk of sludge to TSF seepage quality is considered minor.	RT/TD to review	LDN/UFN	BWG	KP		GM		RT; June 29	Ready for Publishing
1905	MLARD 7.1.4	ML/ARD Management Plan	LDN/UFN Terryn Kuzyk		Jul 28, 2022	2	Follow up	Information Requirement	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1906	MLARD all of Section 6	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Missing section regarding information on how the ML/ARD will be collected and treatment systems	The Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application) includes information on site water management and monitoring. A summary of the proposed water treatment is included as Section 7.2.10 of this plan.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1907	MLARD 6	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	TSF was also designed to store NAG3 material, is that correct. Not mentioned here.	Yes, NAG3 will be either used in construction of the TSF dams or otherwise stored in the TSF. All NAG3 will be submerged within five years of mining to limit metal leaching.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1908	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will there be a water cover on closure or just the till layer to cover any exposed PAG material?	A tailings pond will remain in place after closure and maintain saturation of a large portion of the tailings. A relatively small tailings beach will remain unsaturated at closure. This area of the tailings beach will be covered with a till/overburden layer to shed meteoric water and limit oxygen ingress into the uppermost tailings layer.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1908	MLARD 6.1.1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1909	MLARD 6.1.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Has the potential for mobilization of Zn from NAG3 been looked at if this material is used for TSF embankments (mobilization by TSF seepage?)	Yes, the Zn leaching potential from NAG3 waste rock has been assessed and is considered similar to that of PAG1 and PAG2 waste rock under pH-neutral conditions. Zn leaching potential is considered low under saturated conditions. TSF seepage is assumed to remain neutral. The pH of the TSF ponds will be monitored and a decrease in pH	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1910	MLARD Figure 6.1-1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Use Sulfur cut-off grade before using NPR to classify PAG	The comment is acknowledged. However, no updates to the waste rock classification will be undertaken at this time. The current strategy is considered more conservative than incorporating an additional cut-off based on sulfur content.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1911	MLARD 6.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will ML/ARD collection drains from the ore stockpiles also be lined with geosynethetic?	Yes, geotextile will be wrapped around the collection drains.	No	LDN/UFN	KP		Greg/John	GM	Ready for Submission	KP, June 28	Ready for Publishing
1911	MLARD 6.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1912	MLARD 6.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	When acidification of drainage is observed...' how will this be observed, will there be regular monitoring of this seepage throughout the life of the landforms?	The LGO stockpile collection pond, which captures LGO stockpile runoff and toe discharge, will be monitored as part of the mine site surface water quality monitoring program. Monitoring will be conducted monthly. Further details on the surface water quality monitoring program are included in the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1912	MLARD 6.3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 22, 2022	2	Follow Up	Comment	No	Consider updating the ML/ARD to remove undefined statements, and put in monitoring and what triggers (pH?) the neutralisation before discharge	The comment is acknowledged and will be considered in future updates of the ML/ARD Management Plan.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing

1913	MLARD 6.4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will there be any exposed PAG still remaining after the pit lake is formed and how will these be managed or what is the risk from these exposed PAG walls	PAG exposures remain above the final pit lake elevation and are expected to continue to contribute loads to the pit lake through the Post-Closure period. The percentage of pit wall above each bench elevation, divided by rock class (e.g., PAG1, PAG2, NAG3, etc...) is included as Table 5.3.1 of the ML/ARD Management Plan (Appendix 9-D of the Application). These proportions are incorporated into the water quality model, and pit lake predictions are presented in the Water Balance and Water Quality Model Report (Appendix 5-D). No specific PAG management is currently planned for the exposed pit walls.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1914	MLARD 7.1.4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will the water quality (and contaminant loads) of the incoming water into the water treatment plants be monitored and what is the frequency?	WTP influent and effluent water quality monitoring will initially be conducted on a weekly basis and analyzed for a full suite of parameters. The frequency of WTP sampling may be reduced following the commissioning and a period of routine operation of each system once a consistent, long-term trend in effluent quality is demonstrated. This information is included in Section 7.3.3 of the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application).	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1915	MLARD 7.1.4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will kinetic tests be performed on the sludge to understand long-term potential metal remobilisation once its placed in the TSF	Yes, saturated columns are proposed as part of the detailed WTP sludge monitoring program that will occur in the first two years of WTP operations. Further details on sludge monitoring are included in Section 7.1.4 and Section 7.1.7 of the ML/ARD Management Plan (Appendix 9-D of the Application).	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1916	MLARD 7.1.6	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	What management strategy will be put in place if QAQC sampling indicates inconsistencies in original monitoring data set	As a first step, the onsite laboratory will be contacted and asked to revisit analytical methods, data interpretation and internal QA/QC procedures. Further, the effect of the inconsistencies on material classification proxies would be assessed. The placement records of waste rock on site would be reviewed and contingency measures for misclassification of PAG as NAG4 or NAG5, as outlined under Section 7.2 of the ML/ARD Management Plan (Appendix 9-D of the Application), would be triggered as necessary.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1917	MLARD 7.1.7	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Have adaptive management strategies been put in place (i.e. changes to how waste is classified) if QAQC of waste material indicates inconsistencies with geochem classification of waste material?	See response to Comment #1916.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1918	MLARD Table 7.2-1	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Is there enough space in the designed TSFs to allow for unexpected/extra PAG or NAG3 material	A contingency storage allowance is incorporated in the design basis of the TSF to proactively accommodate potential for increased waste quantities being PAG. The contingency storage allowance is approximately 1.3 Mm^3 for Stage 1 and increases up to approximately 5 Mm^3 for Stage 2, as summarized in Section 5.6.2 of Appendix 3-J. Thereafter, the staged design elevations for on-going construction of the TSF will be progressively updated as appropriate, based on the amounts tailings and waste rock deposited in prior years and projected for the following years with contingency allowances in consideration for the level of uncertainty in the waste production estimates. Regular review and adjustment of TSF dam raising schedules based on the actual rate of filling is a typical practice that as described in Section 5.2.2 of Appendix 3-K.	No	LDN/UFN	KP	Lorax	Dan/John	AT/KP	Ready for Submission	KP, June 25	Ready for Publishing
1919	MLARD 7.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No		See response to Comment #383.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1919	MLARD 7.2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 22, 2022	2	Follow Up	Informaition Requirement	No	As we have not received the (referenced doc in comment #383) and have not had the opportunity to review it, we can't comment or resolve this comment. Carry forward to Round 3.	This comment is acknowledged. It is our understanding that BW Gold Ltd. has resent the document being referenced ("R1_EMLI Geoscience Comment IDs 376c, 378, 383, 385, and 386.pdf"). We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 10	Ready for Publishing
1920	MLARD 9	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Suggest that review of ML/ARD should also be triggered by any project material changes, for example, when organizational structure during operations is assigned	The plan will be reviewed annually, at a minimum, as part of reporting. However, if significant project changes occur, this would trigger a review of the plan, if warranted.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1921	MLARD 9	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Who will updated ML/ARD or this ML/ARD be distributed to?	BW Gold will make the suggested revision - section references in the Appendix will be updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	BWG			GM	Ready for Submission	GM; June 18	Ready for Publishing
1922	MLARD Appendix A pg. 2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Define GC, abbreviation not used early in this SOP	GC is the abbreviation for Grade Control. Grade Control will consist of dedicated Reverse Circulation drilling well in advance of the material being mined.	No	LDN/UFN	BWG		Klaus	GM	Ready for Submission	GM; June 18	Ready for Publishing
1923	MLARD Appendix A pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	QAQC sample - suggest that if you are taking a field duplicate that the original sample is split using riffle splitter	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1923	MLARD Appendix A pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1924	MLARD Appendix A pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Analytical parameters - list all of the aqua regia digest metals to be analysed in the SOP rather than just saying 'aqua regia digestible metals'	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1924	MLARD Appendix A pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1925	MLARD Appendix B pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Analytical parameters - list all of the aqua regia digest metals to be analysed in the SOP rather than just saying 'aqua regia digestible metals'	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1925	MLARD Appendix B pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1926	MLARD Appendix B pg. 2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Reference the SOP that should be followed for decanting supernatant water	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1926	MLARD Appendix B pg. 2	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1927	MLARD Appendix B pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Reference the SOP that should be followed for decanting supernatant water rather than a management plan	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1927	MLARD Appendix B pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1928	MLARD Appendix B pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Suggest you also record the date and time the sample was taken and sample size	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1928	MLARD Appendix B pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing

1929	MLARD Appendix C pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Analytical parameters - list all of the aqua regia digest metals to be analysed in the SOP rather than just saying 'aqua regia digestible metals'	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1929	MLARD Appendix C pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1930	MLARD Appendix C pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Analytical parameters - list all of the aqua regia digest metals to be analysed in the SOP rather than just saying 'aqua regia digestible metals'	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1930	MLARD Appendix C pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1931	MLARD All SOPs	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Suggest that all SOPs have unique document numbers that can be referred to as some SOPs (e.g. tailings) occur as appendices in another MP but there is overlap with this MP	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1932	MLARD Appendix D pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Is vertical variation expected in overburden so that for excavated test pits or auger holes more than lithological type will be intersected and need to be sampled? Is so then this should be covered in the SOP	While some vertical variability would be expected over the full overburden profile, the collection of pre-excavation samples from test pits combined with the sampling conducted during active excavation targeting deeper horizons (>0.5m depth) is expected to provide sufficient information on the change in overburden geochemical characteristics with depth. Detailed vertical sampling over a smaller scale (i.e.., within a 0.5 m test pit) is not proposed as this material will be managed as a single unit.	RT/TD to review	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1933	MLARD Appendix D pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	The SOP should note not to composite across lithological units	The comment is acknowledged and will be considered in future ML/ARD Management Plan updates. It is assumed that the reviewer is referring to overburden horizons.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1934	MLARD Appendix D pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Estimate or measure the oversize (>2 mm) fraction of the total sample so there is an understanding of what proportion the <2mm size comprises. May need to over sample to ensure enough of the <2mm fraction.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1934	MLARD Appendix D pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1935	MLARD Appendix D pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Are there any physical tests (e.g.. particle size distribution, emersons aggregate) that need to be completed on these samples if they are planned to be used for rehabilitation purposes?	The sampling procedures and analyses included in the Overburden Monitoring SOP provided as an appendix to the ML/ARD Management Plan are specific to the geochemical characterization of overburden and are not intended to test the physical characteristics of the material.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 24	Ready for Publishing
1935	MLARD Appendix D pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1936	MLARD Appendix E pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Analytical parameters - list all of the aqua regia digest metals to be analysed in the SOP rather than just saying 'aqua regia digestible metals'	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1936	MLARD Appendix E pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1937	MLARD Appendix E pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will the supernatant fluid also be tested or just the solid sample after filtering?	Under the current procedure, only the sludge solids will be tested after filtering. The analysis of associated supernatant will be considered pending initial results. A revision of the corresponding SOP would be made at that time.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1937	MLARD Appendix E pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1938	MLARD Appendix E pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	High resolution microscopy - what methodology?	The microscopic technique will depend on the objective of the study, which will be defined as initial geochemical data for sludge materials become available. Scanning electron microscopy is one candidate for such testwork.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1938	MLARD Appendix E pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1939	MLARD Appendix F pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Considering the particle size of a waste stockpile, is it feasible to manually dig to get a representative sample	Yes. Trafficked surfaces are generally finer grained and can be manually excavated using a shovel. On lifts where more competent rock with larger particle sizes is deposited, sampling may be aided by a small excavator and screen as needed to obtain the particle size distribution targeted for geochemical characterization.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1939	MLARD Appendix F pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1940	MLARD Appendix F pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Will a grizzly or large sieve be used to remove the oversize fraction of the waste material?	Yes, a sieve will be used to screen the <1/2" material fraction. The coarse fraction remaining on the sieve will be discarded.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1940	MLARD Appendix F pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1941	MLARD Appendix F pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	The instructions say cuttings pile but the SOP is referring to sampling a waste rock stockpile?	The word 'cuttings' should be deleted. This will be updated in future revisions of the ML/ARD Management Plan.	No	LDN/UFN	Lorax			GM	Ready for Submission	GM; June 23	Ready for Publishing
1941	MLARD Appendix F pg. 3	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1942	MLARD Appendix F pg. 4	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Remove as much air as possible before closing with zip tie	BW Gold acknowledges this comment.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing

1943	MLARD Appendix F pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	Analytical parameters - list all of the aqua regia digest metals to be analysed in the SOP rather than just saying 'aqua regia digestible metals'	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	Lorax			GM	Ready for Submission	CB; 21-Jun	Ready for Publishing
1943	MLARD Appendix F pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up	Clarification	No	Carry Forward. Chapter 9 management plans have been stated as undergoing post-permitting updates. Please include this detail in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1944	MLARD Appendix F pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jun 08, 2022	1	New		No	How does the propose analysis for the tailings provide information on the risk from > 1 year of exposure.	Verification monitoring conducted on beached tailings samples exposed for >1 year will provide confirmation on the residual neutralization potential (NP) within the tailings as well as assumptions made around NP depletion rates. Source term modelling, the risk for large scale ARD, and tailings beach management strategies would subsequently be updated as needed.	No	LDN/UFN	Lorax			GM		GM; June 28	Ready for Publishing
1944	MLARD Appendix F pg. 5	ML/ARD Management Plan	LDN/UFN Kirstine Malloch		Jul 28, 2022	2	Follow up		No	Carry Forward. Thank you for the clarification. Please ensure this detail is included in updated plan.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.							Ready for Submission	TD; Aug 16	Ready for Publishing
1945	Chapter 6 Environmental Assessment Predictions		LDN/UFN Jessica Lowey		Dec 20, 2021	0			No	Identify data gaps and uncertainties in models, and describe how they would be addressed in adaptive management and environmental monitoring plans. Included, but limited.	BW Gold acknowledges the comment and will continue the discussion through the Application review.	No	LDN/UFN	N/A			0	Ready for Submission	RT; june 18	Ready for Publishing
1945	Chapter 6 Environmental Assessment Predictions		LDN/UFN Emma Cooke		Feb 02, 2022	0			No	Included, but still limited. Will need to be dicussed further during the Application review.	BW Gold acknowledges the comment and will continue the discussion through the Application review.	No	LDN/UFN	N/A			0	Ready for Submission	RT; june 18	Ready for Publishing
1945	Chapter 6 Environmental Assessment Predictions		LDN/UFN Emma Cooke		Jun 10, 2022	1	New		No	Now that we are in Application Review, please detail how you will discuss "The identified uncertainties and description of how they will be addressed through monitoring, adaptive management programs and potential reclamation research programs"	It is not clear to which part of Chapter 6 the reviewer is asking about. Uncertainties and approaches to address uncertainty were described in multiple sections of Chapter 6 (e.g., 6.3.4.3 [aquatic biota], 6.3.4.4 [fish], 6.7.4 [human health]). Uncertainty and data gaps were also described in Section 6.5 of Chapter 6 (Environmental Assessment Predictions). Uncertainty in model predictions is best managed with the monitoring plans to detect changes of a particular parameter over time (e.g., the Aquatic Effects Monitoring Program [AEMP] plan in Appendix 7-A). The monitoring is required for adaptive management that will identify and mitigate potential risks. The AEMP Plan (Appendix 7-A) and Country Foods Monitoring Plan (EAC Condition 41) both have adaptive management frameworks drafted to identify triggers and determine effectiveness of mitigations and if additional mitigations are required. Table 4.2-8 in Chapter 4 (Reclamation and Closure Plan) identifies reclamation uncertainties and data gaps, in addition to the approaches to addressing them through reclamation research. BW Gold anticipates that the discussion of the identified uncertainties, data gaps and description of how they will be addressed through monitoring, adaptive management programs and reclamation research programs will be discussed as part of the comments and responses during the Application review.	No	LDN/UFN	Lorax	Entia		GM	Ready for Submission	GM; June 17	Ready for Publishing
1946	Chapter 6 Environmental Assessment Predictions		LDN/UFN Jessica Lowey		Dec 20, 2021	0			No	Identify data gaps and uncertainties in models, and describe how they would be addressed in adaptive management and environmental monitoring plans and reclamation research programs (in Section 4.2.5). Included, but limited.	BW Gold acknowledges the comment and will continue the discussion through the Application review.	No	LDN/UFN	N/A			0		GM; June 28	Ready for Publishing
1946	Chapter 6 Environmental Assessment Predictions		LDN/UFN Emma Cooke		Feb 02, 2022	0			No	Included, but still limited. Will need to be dicussed further during the Application review.	-	No	LDN/UFN	N/A			0			
1946	Chapter 6 Environmental Assessment Predictions		LDN/UFN Emma Cooke		Jun 10, 2022	1	New		No	Now that we are in Application Review, please detail how you will discuss "The identified uncertainties, data gaps, and description of how they will be addressed through monitoring, adaptive management programs and reclamation research programs"	This appears to be a duplicate of comment #1945. Please see the response to comment #1945.	No	LDN/UFN	Entia	Entia	Lesley	RT	Ready for Submission	RT; June 20	Ready for Publishing
1947	Chapter 6 Environmental Assessment Predictions	Chapter 6	LDN/UFN Steve Ross		Jun 03, 2022	1	New		No	Geographic extent is regional because the majority of effects will be caused by logging activities, which occur throughout the RSA. As whitebark pine is not intentionally logged as it is an endangered species what exactly are you talking about here, indirect effects please elaborate.	The Comment is referring to text in Section 6.5.5.4 Potential for Cumulative Effects due to Whitebark Pine Regeneration. The supposition is that a certain amount of damage is done to WBP inadvertently due to routine logging operations.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1948	Chapter 6 Environmental Assessment Predictions	Chapter 6	LDN/UFN Steve Ross		Jun 03, 2022	1	New		No	As a result, BW Gold proposes substantive measures to support the recovery of the Tweedsmuir caribou herd, including: These are no longer accurate and need updating according to the new CMMP which has substantially more mitigation measures.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1948	Chapter 6 Environmental Assessment Predictions		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1949	Chapter 6 Environmental Assessment Predictions	Chapter 6	LDN/UFN Steve Ross		Jun 03, 2022	1	New		No	Characterization of Residual Effects to Caribou - This section also needs to be updated according to the effects assessment carried out by ECCC - also contained in the CMMP	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1949	Chapter 6 Environmental Assessment Predictions		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1950	Chapter 6 Environmental Assessment Predictions	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	The effect of habitat loss and alteration is expected to be reversible since habitat will regenerate during the Closure and Post-Closure phases. - The restoration of the site will lead to a substantial loss of wetland and transitional habitats that are favoured by moose so loss of habitat will happen - you should rephrase to say that loss of wetland habitat for moose will be restored through the scheduled wetland offsetting.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1950	Chapter 6 Environmental Assessment Predictions		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing

1951	Chapter 6 Environmental Assessment Predictions	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	Condition 8.15 of the federal DS requires that bat boxes be installed to mitigate any lost bat summer roosts. - Please update with the new mitigation measures for bats as bat boxes are no longer being used.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1951	Chapter 6 Environmental Assessment Predictions		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1952	Chapter 6 Environmental Assessment Predictions-General	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	Effects will be reversible - when effects require the recovery of old growth forest can you still say that effects are reversible as we are talking about 100 years + into the future some species may no longer occur after that period of time and we are quite uncertain if climate will result in previous habitat conditions supporting the same ecological components!	Yes, some effects are reversible in the long term, including regrowth of old forest. Other effects, such as removal of habitat in the mine pit area are not reversible, regardless of the time frame. Distinguishing between the two, while noting the timeframe of reversibility is an important descriptor of the environmental assessment process.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1952	Chapter 6 Environmental Assessment Predictions-General		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1952	Chapter 6 Environmental Assessment Predictions-General		LDN/UFN		06-Oct-22	3	Follow up		No	Memo "R3_LDN UFN_Comment IDs 1948-1956.pdf" skips from ID 1951 to 1953 and does not address 1952 anywhere.	Please see attachment "R4_LDN UFN_Comment IDs 1952 and 1954.pdf"		LDN/UFN	ERM		Greg		Ready for BWG Review		Ready for Publishing
1953	Chapter 6 Environmental Assessment Predictions Table 6.6-4	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	Please update the caribou expected effects according to ECCC more recent assessment (in CMMP)	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1953	Chapter 6 Environmental Assessment Predictions Table 6.6-4		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1954	Chapter 6 Environmental Assessment Predictions pg. 6-96	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	Changes in movement patterns of moose is rated as low magnitude because a measurable change within the range of natural variation is expected, based on species' life history (i.e.., large movements and home ranges). - This statement doesn't make sense can you clarify moose do not generally have extremely large home ranges so the site could easily overlap numerous moose causing displacement and restricting their movements	The construction of the mine site is expected to displace moose from the mine footprint area. However, beyond that displacement, the mine is not expected to impede the movement of moose across the landscape. The mine is not a linear corridor that would restrict moose movement across the corridor.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
1954	Chapter 6 Environmental Assessment Predictions pg. 6-96		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1954	Chapter 6 Environmental Assessment Predictions pg. 6-96		LDN/UFN		06-Oct-22	3	Follow up		No	Memo "R3_LDN UFN_Comment IDs 1948-1956.pdf" skips from ID 1953 to 1955 and does not address 1954 anywhere. Please update the memo to address it	Please see attachment "R4_LDN UFN_Comment IDs 1952 and 1954.pdf"		LDN/UFN	ERM		Greg		Ready for Submission		Ready for Publishing
1955	Chapter 6 Environmental Assessment Predictions pg. 6-97	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	There is no significant change in the amount of available caribou habitat due to the Project. Again please update based on the new CMMP, Mnt Davidson is known caribou habitat that still has low intensity use, it is also very important in the future recovery of caribou, so this statement is not accurate and the use of words such as minimal etc.. is not appropriate given the new ECCC assessment and the general status of caribou.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1955	Chapter 6 Environmental Assessment Predictions pg. 6-97		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1956	Chapter 6 Environmental Assessment Predictions-Section 6.6.5.2 pg. 6-98	Chapter 6	LDN/UFN Steve Ross		Jun 06, 2022	1	New		No	The contribution of the Project to the overall cumulative effects is insignificant to pre-existing and expected future effects associated with forest harvesting, agriculture, and other activities, and the characterization of potential residual cumulative effects is, therefore, the same with and without the Project - Downplaying all the effects is one thing but saying the habitat is the same after removing over 80 km2 (footprint and buffer) of previously little disturbed habitat is not true even at the regional scale, please rephase with a most realistic statement that reflects the removal of a very large chunk of highly utilized wildlife habitat.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them.	RT/TD to review	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
1956	Chapter 6 Environmental Assessment Predictions-Section 6.6.5.2 pg. 6-98		LDN/UFN Steve Ross		30-Aug-22	2	Follow up		No	Request a memo addressing this comment, since no changes are to be made to chapter 6.	Thank you for noting this. BW Gold will not be making further edits to the Application at this time. BW Gold will track substantive errors and omissions and will provide a memo that corrects them. Please see attachment "R3_LDN UFN_Comment IDs 1948-1956.pdf"		LDN/UFN	ERM		Greg		Ready for Submission	TD, Sept 14	Ready for Publishing
1957	Chapter 6 Environmental Assessment Predictions-General	Chapter 6	LDN/UFN Mike Keefer		Jun 10, 2022	1	New		No	The Nations and their technical reviewers do not agree with the EA predictions, as will be apparent from the comments provided. We expect to have multiple detailed discussions moving forward to work through the major concerns we have, and intend to make more substantive comments in round 2.	BW Gold acknowledges the comment and will continue the discussion through the Application review.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing

1958	Old Growth Forest Management SOP Section 1	Content	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Please state what qualifies as "Old Growth" under this project.	As discussed in the Blackwater Gold Project Environmental Assessment, the age of an Old Growth forest in some areas are generally older than 140 years and in other areas, the forests are older than 250 years.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 26	Ready for Publishing
1958	Old Growth Forest Management SOP Section 1	Content	LDN_UFN Josee Trudeau		Jul 27, 2022	2	Follow Up	Comment	No	Please add reference to how the term "Old Growth" is defined by BW and how it is determined for each area (the methodology for determinng what is 'old growth'). "The EM and CM will review baseline old growth forest mapping relative to the proposed clearing footprint". How did the baseline maps differientiate between "old growth" and other forest age classes? Where are these baseline maps found? How often and under what circumstances are these baseline maps updated? Include a reference to where to refer to those maps, or include the maps as an appendix to this SOP.	Baseline mapping of old growth forests were complete in 2013 (see Figure 3.2-3 in Appendix 2-Q of the Application). The map of the mine site area will be provided in the Old Growth Management Standard Operating Procedure. It is not expected that the baseline maps will be updated prior to construction within the permitted mine site area (i.e., Certified Project Description boundary). However additional mapping may be required should the Transmission Line alignment differ from that assessed in 2013 (the Transmission Line is not a component of this Application). Section 2.2.5.2 of Appendix 2-Q of the Application details the methodology for differentiating old growth forests within the mine site boundary: The age of old growth forests varies from one Biogeoclimatic (BGC) unit to another. Forests that occur in areas where stand-initiating events are frequent have shorter intervals since their last disturbance, and old growth forests in these areas are generally older than 140 years (i.e., BGC unit SBSdk, SBSdw3, SBSmc2, and SBSmc3). The time since last disturbance in stands with infrequent stand-initiating events is greater, and old growth forests in these areas are generally older than 250 years old (BGC unit ESSFmv1, and ESSFmv1p). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
1958	Old Growth Forest Management SOP Section 1	Definition and content	LDN/UFN Christina Delaney		25-Aug-22	3	Follow Up	Comment	No	Did the base mapping include any ground truthing of the VRI data? If not when we request that is to be completed prior to any clearing activities. It is important to ground truth VRI data, as it can be inaccurate. Also, it is important to assess tree size and ID very old stands, as not all forest stands beyond a given age threshold has the same value i.e., some stands have greater habitat value, some stands have greater cultural value etc. Therefore it is important to ID the highest value stands. The information provided by your response above should be added to the SOP. It is necessary to provide this information on how old growth is determined and mapped.	The mine site, mine site access road, freshwater supply system, and airstrip were mapped using a standard TEM (RIC, 1998) approach based on bioterrain and three-dimensional (3D) aerial photograph interpretation employing 2011 aerial photography and LiDAR (Light Detection and Ranging). Field-based ecosystem mapping was based on the Standards for Terrestrial Ecosystem Mapping in British Columbia (RIC, 1998), data collection was based on the principles and methods outlined by the Field Manual for Describing Terrestrial Ecosystems (MOFR and BC MOE, 2010), and Ecosystem classification was based on the Land Management Handbook 24 (LMH) (DeLong et al., 1993). The mine site, due to a higher degree of anticipated disturbance, required a SIL of 3 (25 % to 50% polygon inspections). Survey plots completed in 2011 focused on data from the mine site LSA. The subsequent field survey in 2012 focused on data from the proposed freshwater supply system and transmission line. The final field survey in 2013 focused on data from the mine site, proposed mine access road, airstrip, and transmission line. The amount of old growth forest in each of the Project component LSAs was calculated based on the ecosystem map. In TEM, structural Stage 7 represents old forest; therefore, ecosystem units mapped as structural Stage 7 were selected to represent old growth forest. Structural stage was cross-referenced with VRI to validate the structural stage attribute.		LDN/UFN	ERM		Ben		Ready for Submission	RT; sept 15	Ready for Publishing
1958	Old Growth Forest Management SOP Section 1	Definition and content	LDN/UFN Mikayla Davis		06-Oct-22	4	Follow Up	Comment	No	Thank you for that information. We ask that you commit to including those details in the SOP as it is very important information.	The information provided in response to the Round 2 comment will be provided in the Old Growth Forest Management Standard Operating Procedure. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Ben		Ready for Submission		Ready for Publishing
1959	Old Growth Forest Management SOP Table 2-1	Acronyms	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Since these SOPs don't have an acronyms page, be sure to write out the complete words , titles of phrases prior to the use of the acronym (e.g. EMS and MP)	The Old Growth Forest Management SOP will be reviewed to write out terms/words first used, followed by the acronym in a subsequent version. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1959	Old Growth Forest Management SOP Table 2-1	Acronyms	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP that will be provided for review.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1960	Old Growth Forest Management SOP Table 2-1	Content/Clarification	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Supervisors and department managers: What is the difference if they both serve the same purpose and report to the same person? Please clarify in table	The Construction and Production supervisor are defined roles and have a high level of site responsibility and oversight. Departmental managers are more limited in their roles and their responsibilities are specific to their departmental scope.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1961	Old Growth Forest Management SOP Table 2-1	Content	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Are employees, contractors not responsible to follow and carry out the SOPs as part of their jobs? Please add.	The second column and last row of Table 2-1 in the Old Growth Forest SOP will be revised in a subsequent version as follows: "Employees and contractors are responsible for implementing the SOPs as they pertain to their job responsibilities and requirements." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1961	Old Growth Forest Management SOP Table 2-1	Content	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP that will be provided for review.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1962	Old Growth Forest Management SOP Section 3.1	Clarify	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Can you clarify what the issue is with site drainage? How would the CM mitigate this should it be found to be discharging in Old growth areas.	Section 3.1 of the Old Growth Forest SOP will be revised in a subsequent version as follows: "Site drainage will also be evaluated during this review to mitigate any potential changes to hydrology within old growth areas." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1962	Old Growth Forest Management SOP Section 3.1	Clarify	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP that will be provided for review.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing

1963	Old Growth Forest Management SOP Section 3.1	Typo	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Once the disturbance…., survey will clearly stake…. I think it supposed to say, "a survey" or perhaps, "surveyors"?? Please revise.	Survey is a common term for surveyors on construction projects and the Old Growth Forest Management SOP will be utilized by someone with knowledge of this terminology.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1964	Old Growth Forest Management SOP Section 3.2	Clarify	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	point 1: what do you mean by "if applicable"	If applicable refers to GPS capacity. Some equipment has GPS as part of the operating system, older models do not.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1964	Old Growth Forest Management SOP Section 3.2	Clarify	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow up	Clarification	No	For equipment that does not have GPS capabilities, how will the final clearing boundaries be made clear to logging/clearing crews?	Where GIS (digital means) of identifying clearing limits are not available, physical means will be used. For example, clearing crews will be shown the survey boundary (as demarkated by flagging tape) and instructed as the extent of the area (and the side of the tape) that clearing will take place.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 2	Ready for Publishing
1965	Old Growth Forest Management SOP Section 3.2	Clarify	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	What is a century tree ? Not a known forestry term; please define	A century tree refers to one that is at least 100 years old.	/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 26	Ready for Publishing
1966	Old Growth Forest Management SOP Section 3.3	Content	LDN_UFN Josee Trudeau		May 27, 2022	1	New		No	Will there not also be flagging between signs? 200m is a long way off in undulating terrain and may not always be visible. Maps located in key areas to inform staff and or given to key staff members who are driving equipment would also be prudent.	Once the mine is into the Operations phase, the risk of disturbance to the old growth forest area is limited, because the majority of the Project footprint has been defined. Any additional clearing/disturbance planned during Operations would be subject to pre-clearing surveys and qualified professional review, at which point polygons for species at risk and old growth forests etc... would be revisited.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 16	Ready for Publishing
1967	Fugitive Dust SOP Section 4		LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	They will conduct an inspection each day, at relevant sources listed in Table 3-1, during hot and dry weather. A hot and dry day is defined as having a daytime high greater than 20°C with less than 0.25 mm of precipitation in the preceding 24 hours. What about inspection frequency for periods that don't meet these thresholds?	The TARP presented in Table 9.1-1 is always in effect and responses will be made when triggers are exceeded. The inspections referenced in Section 4 of App D are only required during the conditions described, because during other periods natural dust suppression will be occurring.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; June 26	Ready for Publishing
1968	Fugitive Dust SOP Section 5.3		LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Minimize stockpile areas; Does this mean creating bigger stockpiles rather than many smaller ones? Please clarify how stockpiles can be minimized.	It is important to minimize the surface area of the stockpiles to reduce fugitive dust generation by wind. This can be accomplished by controlling the height of the stockpiles and creating larger stockpiles rather than many small ones. The most efficient storage shape in terms of exposed surface area is a large pile versus many smaller piles, and that exposed surface area is a key driver of dust emissions from stockpiles	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; June 26	Ready for Publishing
1969	Fugitive Dust SOP Section 5.3		LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Seed topsoil stockpiles to reduce erosion and invasive-species establishment Please clarify that only native seed mix will be used.	BW Gold will add a caveat about only using native seed mix. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; June 26	Ready for Publishing
1969	Fugitive Dust SOP Section 5.3		LDN/UFN Emma Cooke		Jun 02, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
1970	Fugitive Dust SOP Section 6		LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	What is included in the daily visual inspection log?	This log will include a description of all visual inspections or observations related to dust plumes from operations.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1971	Fugitive Dust SOP Section 5.1.1		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	Watering shall be controlled so there is no overland water flow. What mechanism will be used to control overland water flow?	The water truck operators will be trained to only apply water as a wetting agent and not to create overland flow.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1972	Fugitive Dust SOP Table 2-1		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	What qualifications will the "supervisors" have to assess dust management procedures?	The training requirements of different positions are described in Section 8.1	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1973	Fugitive Dust SOP Section 5.1.1		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	Who will assess if notable surface run-off is occurring? What actions will be undertaken if notable surface run-off occurs before watering is stopped?	Truck operators and Supervisors will monitor the application of water on roads. If water begins to runoff, watering will cease on that section of the road until it has dried.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1974	Fugitive Dust SOP Section 5.1.1		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	Where will "clean water" be sourced from?	Water will be sourced from control ponds and the water management pond during operations and construction.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1975	Fugitive Dust SOP Section 5.1.1		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	What are the environmental implication of using calcium chloride for dust suppression? How will these be monitored (assuming chemical dust suppression is used), and who will conduct the monitoring?	When used appropriately, there are limited effects of using calcium chloride. Calcium chloride is a common substance used to control fugitive dust. BW Gold will follow guidance from the BC best practice manual on fugitive dust management (https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/guidance-documents/dust_management_plan_guidance.pdf), which refers to the best management practice manual from the NWT. (https://www.enr.gov.nt.ca/sites/enr/files/guidelines/dustsupression.pdf). The application rate of dust suppressant will be carefully monitored to ensure adequate coverage without pooling or runoff of products. The amount of dust suppressant applied will not exceed the minimum amount required to effectively suppress dust. Dust suppressant will be bladed or incorporated into the road immediately upon application, to ensure the product does not migrate off the roadway. There will be no evidence of excess product on the roadway. The dust suppressant will not migrate or run off the traveled portion of the roadway. BW Gold will revise the plan to indicate this change. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1975	Fugitive Dust SOP Section 5.1.1		LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved until we recieve an updated SOP for review (carry forward). Additionally, what mitigation measures will be in place if chemical dust suppression is used and heavy precipitation occurs? Please include that areas that are prone to flooding will not have calcium chloride applied. Please respond to original comment on who be conducting this monitoring.	Areas that are prone to flooding will not have calcium chloride applied (AQDMP will be updated to include this disclaimer). The Environmental Manager or their designate will be in charge of monitoring. Calcium chloride will not be applied if precipitation is occurring, or forecast to occur before the product sets or cures. Areas that are prone to flooding will not have calcium chloride applied.		LDN/UFN	ERM		Andres	RT	Ready for Submission	TD; Aug 15	Ready for Publishing
1975	Fugitive Dust SOP Section 5.1.1		LDN/UFN Mikayla Davis		22-Jul-22	3	New	Comment	No	Please commit to including all of the response in the updated SOP, not just "areas that are prone to flooding will not have calcium chloride applied".	All of the response will be included in the updated SOP. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission	RT; sept 15	Ready for Publishing
1976	Fugitive Dust SOP Section 5.1.2		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	What are the general speed limits during normal activities vs during periods of higher fugitive dust emissions?	Speed limits will be established based on road design class, with the maximum speed limit of 50 km/h on all Project roads. Supervisors will determine the level of speed limit restrictions based on conditions at site.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing

1976	Fugitive Dust SOP Section 5.1.2		LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Clarification	No	Where can road design class information as it relates to speed limits be found?	Mine site traffic control plan has this required information. Appendix 9-K Section 4.2, Section 7.2, Table 7.6-1		LDN/UFN	ERM		Andres	AT	Ready for BWG Review		
1977	Fugitive Dust SOP Sectio 5.1.3		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	Where will coarse aggregate be sourced from?	Coarse aggregate will be sourced from the borrow area during construction and NAG rock from the pit during operations.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1978	Fugitive Dust SOP Section 5.2		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	What are the criteria for weather conditions that would postpone blasting events?	Where dust or fume impacts on employees and environment cannot be avoided, blasting must be postponed until wind direction does not disperse emissions towards employees or local sensitive receptors. The Drill and Blast Superintendent and Mine manager will ultimately decide when to postpone blasting (the EM and Health and Safety can inform this decision).	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT June 26	Ready for Publishing
1979	Fugitive Dust SOP Section 7		LDN/UFN Mikayla Davis		Jun 06, 2022	1	New		No	Who is the health and safety representative and mine manager? Please add their signatures.	The health and safety representative and mine manager will be signing once through application review and the plans are being finalized for implementation.	No	LDN/UFN	ERM		Andres	RT	Ready for Submission	RT: June 28	Ready for Publishing
1979	Fugitive Dust SOP Section 7		LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated SOP for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Andres		Ready for Submission		Ready for Publishing
1980	Plant Species at Risk SOP Section 1	Reference	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Refer to map and appendices of species at risk photos and descriptions.	Reference to Figure 3.1-1 and Appendix A will be added to Section 1 at the end of the second paragraph. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT June 26	Ready for Publishing
1980	Plant Species at Risk SOP Section 1	Reference	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated SOP for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie		Ready for Submission		Ready for Publishing
1981	Plant Species at Risk SOP All	Acronyms	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Make sure all the acronyms are spelled out at first mention. In this case SOP and MP are not, possibly more	The acronym SOP refers to standard operating procedure, and MP refers to Management Plan. A complete review will be done to check that all terms are spelled out on first use with the applicable acronym. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT June 26	Ready for Publishing
1981	Plant Species at Risk SOP All	Acronyms	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated SOP for review. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1982	Plant Species at Risk SOP Table 2-1	Content	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Are employees, contractors not responsible to follow and carry out the SOPs as part of their jobs? Please add. Who does the employee report plant observations to?	Generally, employees and contractors are not responsible for SOPs, they simply need to be aware of them through site orientation, unless it is specific to their job. They could be disciplined for conducting 'work' outside of their job description. The second column and last row of Table 2-1 will be amended to include: "Employees and contractors can report any incidental observations of plant species at risk to the EM." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	Rt June 26	Ready for Publishing
1982	Plant Species at Risk SOP Table 2-1	Content	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow up	Comment	No	Being aware of a plan and being required to follow a plan are two different things. Employees and contractors should be required to follow the plan.	BW Gold agrees with the statement made by the reviewer. Employees and contractors will be required to follow the plan to the extent that it pertains to their work, the ultimate responsibility for compliance and effective communication about plan requirements will rest with BW Gold manager/supervisors and environment team.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1982	Plant Species at Risk SOP Table 2-1	Content	LDN_UFN Baylie Sjodin		23-Aug-22	3	Follow up	Comment	No	Comment unresolved until the SOP is updated to state that employees must follow both the SOP and VMP. Currently it states they must only be "aware" of them.	Employees and contractors will be required to follow the plan and SOP to the extent that it pertains to their work, the ultimate responsibility for compliance and effective communication about plan requirements will rest with BW Gold manager/supervisors and environment team. Contracts and requirements to abide by plans will be further stipulated in contracts. No updates will be made at this time however there is opportunity to revise language in future if stronger wording is needed (based on demonstrated non-compliance by employees/contractors).		LDN/UFN	ERM		Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
1983	Plant Species at Risk SOP Table 2-1	Content/Clarification	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Supervisors and department managers: What is the difference if they both serve the same purpose and report to the same person? Please clarify in table	The Construction and Production supervisor are defined roles and have a high level of on-site responsibility and oversight. Departmental managers are more limited in their roles and their responsibilities are specific to their departmental scope.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT June 26	Ready for Publishing
1984	Plant Species at Risk SOP Section 3.1	Clarification	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Please clarify site drainage and how it might affect SAR and if so, what will be the mitigation strategy. Steps on how to achieve mitigation should be contained within this SOP	Text will be updated in Section 3.1 of the Rare and At-Risk Plant Species Management Standard Operating Procedure to the following: "Site drainage will also be evaluated during this review to mitigate any potential changes to hydrology within areas occupied by listed or at-risk plants and plant communities." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT June 26	Ready for Publishing

1985	Plant Species at Risk SOP Section 3.1	Content/mapping	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Add: mapping of any delignated areas should be given to equipment operators and hung in visible locations at the site for all employees to see. Maps should include known sites but also potential sites based on site series where these are likely to occur.	Text will be added to the second paragraph in Section 3.1 to include: "Information and/or maps showing clearing boundaries will also be shared with loggers and equipment operators involved in clearing operations." Once the clearing limits have been set, the most important information to convey to the crews is where they can clear and where they cannot, the details of why and what values are contained within the no-clearing areas are less pertinent for the crews (can complicate things). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT June 26	Ready for Publishing
1986	Plant Species at Risk SOP Section 3.1	Content	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Why only orientation on whitebark pine? All workers should get orientation on all known SAR with photos and descriptions so they might identify them in the field.	The Plant Species at Risk Standard Operating Procedure includes Appendix A (Species-at-Risk Descriptions) for use by workers in the field. The statement will be revised to indicate that workers that are actively working around a previously delineated area species-at-risk disturbance boundary will be provided with Appendix A to potentially identify species at risk in the area. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	T/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1986	Plant Species at Risk SOP Section 3.1	Content	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated SOP for review. (Carry forward)	BW Gold commits to updating the plans/procedures as outlined in Round 1 responses. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1987	Plant Species at Risk SOP Figure 3.1-1	Mapping	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Map does not include potential sites or traditional use plant sites.	Traditional use plants have not been mapped in the mine site area. Baseline studies completed in 2011 and 2012 listed species potentially present within the mine site area (see Table 7-2 of the Vegetation Management Plan; Appendix 9-F).	T/TD to revie	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1987	Plant Species at Risk SOP Figure 3.1-1	Mapping	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow up	Comment	No	When were these areas last evaluated for SAR? It's noted in 3.1 that the EM will review mapping, however if mapping is several years old it may miss new growth if any. This map should include SAR that have been checked within 6 months of clearing.	Vegetation baseline surveys within the mine site were completed as part of the 2022 baseline monitoring programs and the baseline map will be updated to include 2022 information. The most recent vegetation baseline survey map will be provided in the Plant Species at Risk Management Risk Standard Operating Procedure (applicable during Construction, Year -2 and -1). It is not anticipated that additional surveys for species at risk will be required given construction activities within the mine site will occur over the next two years and the clearing footprint has been mapped.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1987	Plant Species at Risk SOP Figure 3.1-1	Mapping	LDN_UFN Baylie Sjodin		24-Aug-22	3	Follow up	Comment	No	Who will be conducting the surveys and flagging the boundary of the disturbance boundary after the EM has done a review and compared with the baselin surveys? This step should be conducted by an external QEP (expert ecologist or biologist) to ensure appropriate boundaries are established. The SOP does not specify the person conducting this work. Please revise to make clear so there can be no disagree on who is qualified to make these decisions.	It is not anticipated that additional surveys for species at risk will be required given construction activities within the mine site will occur over the next two years and the clearing footprint has been mapped. Mapping information and gps information outlining boundaries will be provided to the site environmental team and any boundary definition will be supervised by the Environmental Manager or delegated QEP.		LDN/UFN	ERM		Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
1988	Plant Species at Risk SOP Section 3.2	Content	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Please explain why one would need to use herbicides on site.	For a detailed discussion on herbicide use, please refer to the Invasive Plant Management Plan (IPMP). Section 8.2.2.1 of the IPMP details the use of herbicides to manage invasive plants on site.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1989	Plant Species at Risk SOP Section 3.3	Clarification	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	What is meant by "associated disturbance limit"?	The associated disturbance limit is the boundary (limit) between disturbed and undisturbed areas. The term is used to associate a disturbance limit with a sensitive receptor.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1990	Plant Species at Risk SOP Section 3.3	Clarification	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	In above section 3.1 it says no work zones will be flagged and staked, here it says signs every 200m. Please clarify what will be used and when.	The statement "spaced a maximum of every 200 m" is specific to the Operation and Closure phase of the project and considers that the majority of the clearing impacts are complete and the project footprint is established.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1990	Plant Species at Risk SOP Section 3.3	Clarification	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	No-work zones should maintain flagging and stakes through operation and closure to ensure foot traffic or other (e.g., ATV use) does not disturb SAR. There is often little regard for care in areas with only signs.	As stated in the previous response, the signs and spacing will be specific to the Operation and Closure phase of the project and activity/traffic will be focused on the operating the mine and access to 'no work zones' is expected to be limited. Thus BW Gold will continue to maintain the zones with signage and notification to employees of the areas. In the event there is non-compliance, further managment actions (e.g., flagging and stakes) can be implemented to prevent species at risk disturbance.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1990	Plant Species at Risk SOP Section 3.3	Clarification	LDN_UFN Baylie Sjodin		24-Aug-22	3	Follow Up	Comment	No	It is understood the focus for staking and flagging is specfic to Construction, while the signs are specific to Operation and Closure. However, as per your response you "expect" access to no work zones to be limited. This is not a guarantee. A 200m spacing of signs will not stop foot traffic or other (e.g. ATV), those are far too far apart to be seen from a central access point. Continuous foot traffic (whether expected to be limited or not) can have a detremental effect on plant species if the walker is unaware of what to avoid. Therefore, the stakes and flagging (which will already be in place for Construction) should remain up and be maintained as an additional layer of protection for these species. We are not discussing common plant species, but those that are considered at risk and all measures to ensure their protection should be taken.	Flagging will also not prevent foot traffic and ATVs. If there is non-compliance noted and any disturbance to SAR then more concrete mitigation measures will need to be implemented as part of the adaptive management strategy.		LDN/UFN	ERM		Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
1991	Plant Species at Risk SOP Appendix A	Content	LDN_UFN Josee Trudeau		Jun 02, 2022	1	New		No	Please add photo of Sickleleaf moss.	A photo of Sickleleaf moss will be added to the SOP. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1991	Plant Species at Risk SOP Appendix A	Content	LDN_UFN Josee Trudeau		Jul 22, 2022	2	Follow Up	Comment	No	Unresolved, until we are provided with an updated SOP for review. (Carry forward)	BW Gold commits to updating the plans/procedures as outlined in Round 1 responses. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1992	Riparian Area Management SOP General	General	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Apart from the streams listed in table 5.1-1, are there any others waterbodies that will be impacted and need buffers during Early Works? (Not including wetlands which should be addressed in the wetlands SOP).	A separate Construction Environmental Management Plan was submitted as part of the early works approval process and was reviewed by LDN and UFN previously.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1992	Riparian Area Management SOP General	General	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Clarification	No	Yes, we were provided this and all it says is "Construction activities such as clearing and grubbing, excavation and soil handling in close proximity to watercourses have the potential to impact fish and fish habitat, aquatic habitat and riparian areas. Potential effects include alteration of aquatic habitat and reduction of fish health and survival". **The CEMP does not identify streams and other waterbodies that will be impacted during Early Works. Please provide a list of streams and waterbodies that will be impacted and need buffers during Early Works.**	As stated in the Early Works Permit Application Section 2.9.2.1, Table 2.9.2, and indicated on Figure 2.9-2, a 30 m riparian buffer will be maintained for all Early Works to protect fish and aquatic resources. The Early Works riparian buffers are maintained on the Davidson Creek and tributaries where intersecting the footprints of the TSF Site C Starter Dam, the Freshwater Reservoir Area, Open Pit and Operation Camp area within the mine site area. Outside the mine site area there will be riparian buffers on Creek 661, Turtle Creek and Creek 705. LDN and UFN were consulted on the Early Works permitting and as such have been provided with a copy of the application. BW Gold would be pleased to provide the application again if requested.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing

1993	Riparian Area Management SOP 5.1	Clarity	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Site Survey is mentioned multiple times, is this a software that BW Gold will use? If so, adding a sentence on what exactly Site Survey refers to would be helpful.	Site survey refers to the survey team or surveyors (this is commonly used construction terminology).		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1994	Riparian Area Management SOP 5.1	Clarity	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Are there herbicide policies for LDN and UFN territories that can be incorporated here? Only Stellat'en and Nadleh Whut'en First Nations are mentioned.	BW Gold is not aware of existing LDN or UFN herbicide policies, please advise if this is incorrect.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1994	Riparian Area Management SOP 5.1	Clarity	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow up	Comment	No	Both LDN and UFN have indicated that they do not support the use of herbicides in their territories, please incorporate this into this SOP and all other relevant plans. What are Stellat'en and Nadleh Whut'en herbicide policies? They are not elaborated on anywhere in the management plans. See comment ID 630 as well.	BW Gold recently received the LDN Herbicide Use Policy (August 2022) and as indicated in response to comment #630 has committed to updating the Invasive Plant Management Plan in accordance with their policy. BW Gold has been told that Nadleh Whut'en and Stellat'en have a herbicide policy, but has not been provided with a copy of the policy. If a policy is provided, it will be appended to the Invasive Plant Management Plan.		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 11	Ready for Publishing
1994	Riparian Area Management SOP 5.1	Clarity	LDN/UFN Mikayla Davis		22-Jul-22	3	Follow up	Comment	No	Keefer is meeting with UFN on August 26th to discuss if they will have a similar document to provide to Artemis on their position for herbicide use in their territory. We will inform Artemis as soon as we have information to provide. Nadleh Whut'en amd Stellat'en are not represented by Keefer. Reach out to their consultants to obtain their policies. Since Artemis has claimed they will be following their herbicide policies we find it problematic that you don't have this information. We will be following up with their consultants on this.	BW Gold acknowledges the comment.		LDN/UFN	ERM		Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
1994	Riparian Area Management SOP 5.1	Clarity	LDN/UFN Mikayla Davis		06-Oct-22	4	Follow up	Comment	No	See comment ID 630 and 691.	BW Gold acknowledges that UFN will keep BW Gold updated on discussions regarding the use of herbicide in their Territory. BW Gold commits to ongoing discussions regarding the use of herbicide for invasive plant treatment. Table 8.2.2 - Mechanical Control Methods for Invasive Plants includes revegetation and seeding along with hand pulling/digging, collecting and bagging and hand mowing and mowing. BW Gold acknowledges the comment, however the company has never been provided with a copy of the policy, only been told there is a policy prohibiting use within the StFN and NWFN territories. If a policy is provided, it will be appended in a future iteration the plan.		LDN/UFN	BWG		TRavis		Ready for Submission	TD, Oct 17	Ready for Publishing
1994	Riparian Area Management SOP 5.1	Clarity	LDN/UFN Mikayla Davis		17-Nov-22	5	Follow up	Comment	Yes	UFN remain opposed to the use of herbicides in their Territory. Because some of the invasive plants identified in the 2011 baseline data do not respond well to mechanical treatment (e.g., orange hawkweed), as referenced in the IPMP, the best strategy for treatment may include fertilizer application, seeding, mulching, or solarization. Please add this information to your treatment options for invasive plants or provide a justification for why these methods are not considered and/or included in the plan. If BW Gold has not received these policies, please explain how you propose to follow their guidelines within the IPMP, VMP, and Riparian SOP where they are referenced.	BW Gold has not received written policies from StFN and NWFN regarding herbicide use in their Traditional Territory. However, SFN, StFN and NWFN have verbally expressed that herbicides are not to be used within their Traditional Territory. In absence of a written policy, BW Gold is committed to complying with the verbal position on herbicide use within Indigenous nation territories. As stated in the Round 5 response to Comment ID#630, the Invasive Plant Management Plan has been updated to reflect that BW Gold will comply with LDN's written herbicide use policy and the verbal position on no herbicide use with the territories of UFN, SFN, StFN, and NWFN. The potential treatment options for invasive plant management will be updated to include cultural control methods (instead of chemical treatment) in addition to mechanical and biological control. The Riparian Area Management Standard Operating Procedure will be updated to state that BW Gold will comply with Indigenous nation herbicide use policies (written or verbal) and refer to the IPMP regarding potential use of herbicides when a Qualified Professional has deemed it to be the only effective method of control and has been approved (by the Indigenous nation) for use in a Traditional Territory. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG					TD, Nov 24	Ready for Publishing
1995	Riparian Area Management SOP Table 5.1-3	RRZ	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	To be complaint with conditions, the 30m no disturbance zone must be maintained. If this is the case, then why would tree harvesting and brush clearing be permitted in the RRZ?	If there is a permitted stream crossings or other activities, then clearing within the RRZ would be required.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1995	Riparian Area Management SOP Table 5.1-3	RRZ	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow up	Clarification	No	What mititgation measures are in place for clearing within the RRZ then? Apart from simply minimizing the clearing widths.	Mitigations listed in Table 5.1-2 of the Riparian Management Area Management Standard Operating Procedure would be applied to clearing within the Riparian Reserve Zone (RRZ).		LDN/UFN	ERM		Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
1995	Riparian Area Management SOP Table 5.1-3	RRZ	LDN/UFN Brenley Yuan		29-Aug-22	3	Follow up	Comment	No	Table 5.1-2 states: "Re-vegetate and stabilize any disturbed soil to prevent post-construction erosion in accordance with the Reclamation and Closure Plan." Re-vegetation should occur immediately after construction and not in the Reclamation and Closure phases. This will reduce the likelihood of invasive species establishment and minimize the amount of time the riparian areas are prone to erosion. Please revise language to reflect this.	Section 4.7 of the Reclamation and Closure Plan indicates that vegetation treatments used to stabilize exposed soils will be on going through Construction and Operations and not limited to the Closure and Post-Closure phases.		LDN/UFN	ERM		Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
1996	Riparian Area Management SOP Table 5.1-3	References	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Refer to general riparian management area SOPs (table 4.2-1). This table does exist in this document, please advise where it would be located. Is this meant to be table 5.1-2?	The references to Table 4.2-1 will be updated to 5.1-2 throughout Table 5.1-3 in a future iteration of the plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1996	Riparian Area Management SOP Table 5.1-3	References	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing

1997	Riparian Area Management SOP Table 5.1-3	General	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Suggest adding "and buffer wildlife trees", to S6 RMZ in table 5.1-3.	The final bullet in Table 5.1-3 will be amended to say: "Retain and buffer wildlife trees." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1997	Riparian Area Management SOP Table 5.1-3	General	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (Carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
1998	Riparian Area Management SOP Section 7	General	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Who will be the environmental manager and mine manager signing off on this? Please add names and signatures.	Documents will be signed by the Environmental Manager and Mine Manager once finalized and a version tracking (with sign off) will be added for document control. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1998	Riparian Area Management SOP Section 7	General	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RTI Aug. 7	Ready for Publishing
1999	Riparian Area Management SOP Section 3	General	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Please indicate that either the CM or EM will be a designated professional able to conduct this work/sign off on it.	The Environmental Manager and Mine Manager sign off as an agreement to implement the conditions of the Standard Operating Procedures (SOPs). The SOPs have been prepared by qualified professionals (QPs) and their qualifications will be added to this (and other) plans as a separate row 'Prepared By'. A QP or a qualified person under the direct supervision of a QP will implement SOPs.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
1999	Riparian Area Management SOP Section 3	General	LDN/UFN Mikayla Davis		Jul 22, 2022	1	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT		RT; Aug. 7	Ready for Publishing
2000	Riparian Area Management SOP General	General	LDN/UFN Jessica Lowey		Jun 07, 2022	1	New		No	Please provide a map showing what watercourses will be lost and which will be buffered appropriately.	A figure indicating the watercourses and associated wetlands that will be lost as a result of construction activities and those that will be buffered will be provided in the Riparian Area Management Standard Operating Procedure. The figure will also designate approved stream crossings. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2000	Riparian Area Management SOP General	General	LDN/UFN Jessica Lowey		Jul 22, 2022	1	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT		RT; Aug. 7	Ready for Publishing
2001	Riparian Area Management SOP General	General	LDN/UFN Jessica Lowey		Jun 07, 2022	1	New		No	Did the offsetting calculations assume that all of the riparian area would be lost for those streams that are being buffered/maintained or was this RRZ/RMZ policy applied?	The SOP applies to early works while streams still provide fish habitat and before fish salvage. During first phase, the RMZ/RMA buffer will be maintained. For the purpose of offsetting, all riparian area for streams in the Project footprint and upstream were considered lost. Information on the riparian loss and offsetting calculations are presented in the Project's Fisheries Act Authorization Application (Palmer, May 2022) and Metal and Diamond Mining Effluent Regulations Authorization Application (Palmer, April 2022).	RT/TD to review	LDN/UFN	Palmer			RT	Ready for Submission	RT; June 28	Ready for Publishing
2002	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jun 07, 2022	1	New		No	"If trees must be felled across streams for safety reasons, they should be lifted out" Needs more definitive language, i.e.., they will be lifted out	The ability to remove a tree is dependent on the safety of workers and access. Also, a QP may decide a tree is best left where it lies.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2002	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jul 27, 2022	2	Follow Up	Comment	No	Please clarify and add detail to the SOP. Cuurently it implies BW Gold will be removing fallen trees from streams	The removal of a tree will depend on safety of workers, access and the opinion of the qualified professional as noted in the response to Round 1 comments. There may be cases where a felled tree can be left in a stream and in some cases the tree may present a debris accumulation/flooding hazard and will be removed. This detail will be added to Table 5.1-2 of the Riparian Area Management Standard Operating Procedure. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2003	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jun 07, 2022	1	New		No	Suggest adding language about exemptions in PFZ's (i.e.., glyphosate use) so that all plans and language align with one another	The preference is to keep prescriptive information within one plan and direct the reader to that plan. This avoids missing updates to regulations/best management practices that can cause confusion in future if conflicting information is found in different plans.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing

2003	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jul 27, 2022	2	Follow Up	Clarification	No	"If required, a minimum width of 10m from the RMA will be a Pesticide Free Zone in accordance with the product label, provincial ergulation, and the IPMP" Although it is agreed prescriptive information should be kept within one plan, the IPMP provides exemptions for the 10m PFZ. Please update this sentence to reference these exemptions because a minimum 10m PFZ is not always the case	The statement in the Table 5.1.2 of the Riparian Area Management Standard Operating Procedure will be revised in accordance with the revisions to the Invasive Plant Management Plan regarding the LDN Herbicide Use Policy and riparian areas (received August 2022; see response to comment #630). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2004	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jun 07, 2022	1	New		No	"No equipment refueling or servicing should be undertaken within an RMA" Needs more definitive language. At the moment this reads that refueling may occur within the RMA	This bullet in Table 5.1-2 will be removed because an earlier bullet uses stronger language (Refueling or servicing of equipment is not allowed within RMA). A caveat will be added to the earlier bullet that "in the unlikely event that there is a spill or equipment breakdown then servicing (and possibly refueling) may be required within the RMA. In such a case the equipment must be fully contained and an environmental monitor present." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2005	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jun 07, 2022	1	New		No	"Ensure all hydraulic machinery entering a stream uses environmentally sensitive hydraulic fluids" How will this be tracked/monitored?	This will be considered in the risk assessment completed prior to executing the work.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2005	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		Jul 27, 2022	2	Follow up	Comment	No	What about monitored when machinery needs fluid top-ups? How is this recorded? Is information kept on-site? In equipment? With the operator?	Machinery maintenance records are kept on site (typically within the maintenance shop) and/or equipment log books.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2005	Riparian Area Management SOP Table 5.1-2	General	LDN/UFN Danny Smart		26-Aug-22	3	Comment	Clarification	No	BW Gold response has been acknowledged. Please include these details in the updated SOP	The Riparian Area Management Standard Operating Procedure will be revised to include details on tracking and monitoring machinery maintenance as stated in response to Round 1 and 2 comments. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
2006	Riparian Area Management SOP Table 5.1-3	General	LDN/UFN Danny Smart		Jun 07, 2022	1	New		No	Within the table it states "retain smaller trees" various times. Define this further. What constitutes a 'smaller' tree?	The term 'smaller trees' will be removed from Table 5.1-3 of the Riparian Management Standard Operating Procedure. Understory trees (used in Table 5.1-3) includes both smaller trees and underbrush growing beneath the forest canopy. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2007	Vegetation Metals SOP Sampling method	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Composite samples from a sample site will comprise sampling from three to five plants, distributed throughout an individual sample site to ensure that the minimum sample weight is collected. What is the size of an 'individual sample site'? - samplers will need to know this.	The Vegetation Metals Standard Operation Procedure will be revised as follows: "An individual sample site will vary in size, but is targeted to be 10 m2 or less. A sampling site may be increased if necessary to an area of 100 m2 to provide minimum sample volumes if plants are sparse or spread out, which will be recorded in field notes." BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; jun 17	Ready for Publishing
2007	Vegetation Metals SOP Sampling method	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2008	Vegetation Metals SOP Sampling method	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Nitrile gloves will be worn during plant and berry tissue collection. Changed between sample sites?	Yes, gloves were and will be changed between sampling sites. The Vegetation Metals Standard Operation Procedure will be revised to indicate that gloves will be changed between sampling sites. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
2008	Vegetation Metals SOP Sampling method	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2009	Vegetation Metals SOP General	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Include what type of information will be documented on field forms/provide an example of the field data form that will be used.	Field forms for multiple field programs are currently under development for BW Gold to standardize the forms across multiple programs (e.g., Vegetation Management Plan, Country Foods Monitoring Plan). These will be issued as drafts for review. If the reviewer has specific information that they would like to see collected as part of the field data form, please provide a list of requested data for consideration.	No	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
2009	Vegetation Metals SOP General	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow Up	Comment	No	Please provide drafts for review when available.	BW Gold will provide the draft field forms when available.		LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2010	Vegetation Metals SOP Equipment	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Will a scale be needed to ensure enough material for samples is collected?	No, a scale is not required. Field technicians will either have experience or be working under the supervision of an experienced individual. Experienced field personnel will be able to estimate sample volumes to obtain the sufficient sample volume for laboratory analysis. In addition, the sample volumes identified in the standard operation procedure for vegetation metals monitoring will be at least double the required minimum sample size typically required by the laboratory.	No	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing

2011	Soil Metals SOP Health and Safety Hazards	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	If there is a known potential for any of the listed substances to be present in toxic quantities, the sampling program has to be carried out by personnel trained in contaminated sites surveys. How will potential for these substances be known?	Areas with known hazardous soil will be identified with the implementation of the Health and Safety Program to provide and maintain a safe and healthy work environment (Chapter 8) and reporting and documenting extent of spills and accidents to the Environmental Manager. The Environmental Manager will also be responsible for notifying personnel of known areas of contamination prior to proceeding with soil sampling programs. Individuals completing soil sampling will also be required to know the history (i.e.., historical spills and potential contamination) prior to sampling as part of pre-trip health and safety planning.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
2012	Soil Metals SOP Field safety hazards	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Add: hazardous soil/toxic substances	Hazardous soil/toxic substances will be added to the 'Field Safety Hazards' of the Soil Metals Standard Operating Procedure. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT; June 20	Ready for Publishing
2012	Soil Metals SOP Field safety hazards	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated SOP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2013	Soil Metals SOP Sampling location	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Soil sampling location characteristics should be assessed according to the methodology specified in the Field Manual for Describing Terrestrial Ecosystems and recorded in the field datasheet. Please reference section for methodology within the document referenced. Is this field datasheet also included in that field manual? If so, also reference which section that can be found. If not, provide example field sheet within the SOP.	Field forms for multiple field programs are currently under development to standardize the forms across multiple programs (e.g., Vegetation Management Plan, Country Foods Monitoring Plan). The 'Field Manual for Describing Terrestrial Ecosystems' will be reviewed and applicable methodology will be included (and referenced) in the standard operating procedures. The field forms will be issued as drafts for review. If the reviewer has specific information that they would like to see collected as part of the field data form, please provide a list of requested data for consideration.	No	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
2013	Soil Metals SOP Sampling location	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and updated methodologies are included in the updated SOP. Please also provide draft field forms for review when available.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ENtia		Lesley		Ready for Submission	RT; Aug. 7	Ready for Publishing
2014	Soil Metals SOP General	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Please detail how equipment (e.g., soil knife, trowels) will be cleaned effectively between locations to eliminate contamination between sample sites.	The Soils Metals Monitoring Standard Operating Procedure will be revised to indicate that between sites, reusable equipment will be washed (or scrubbed if necessary) with distilled water and paper towel, followed by a second rinse with distilled water, followed by drying with paper towel or allowing equipment to air dry. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT: June 28	Ready for Publishing
2014	Soil Metals SOP General	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and these additions are included in the updated SOP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2015	Soil Metals SOP Sampling method	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	It's not clear which samples will be composite. Specifically, "within the mine site: soil samples are collected from the upper 0-2 cm and at regular intervals through the soil profile". How much should be taken from each profile to ensure consistency if this is a composite sample? More clarity needed about which ones are composite and how to prepare.	Sufficient sample volumes for laboratory analysis are determined in advance of each field trip in consultation with the laboratory. Sampling within the mine site will be completed to provide an adequate sample volume that is collected from each of the surface layers, beginning at 0-2 cm and at regular intervals (at minimum every 20 cm) and will not be a composite sample.	RT/TD to review	LDN/UFN	ERM		Tonia	RT	Ready for Submission	RT: June 28	Ready for Publishing
2016	Soil Metals SOP Equipment	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	Similar to comment ID 6 - a scale might be useful equipment to have to ensure enough material is collected	No, a scale is not required. Field technicians will either have experience or be working under the supervision of an experienced individual. Experienced field personnel will be able to estimate sample volumes to obtain the sufficient sample volume for laboratory analysis. In addition, the sample volumes identified in the standard operating procedure for soils metals collection will be at least double the required minimum sample size typically required by the laboratory.	No	LDN/UFN	ERM	ERM	Lesley	RT	Ready for Submission	RT; June 17	Ready for Publishing
2017	Wetlands SOP Section 7	General	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Who will be the environmental manager and mine manager signing off on this? Please add names and signatures.	Documents will be signed by the Environmental Manager and Mine Manager once finalized and a version tracking (with sign off) will be added for document control. Names do not need to be added at this point (i.e.., pre-implementation). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; June 20	Ready for Publishing
2017	Wetlands SOP Section 7	General	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2018	Wetlands SOP Section 3	General	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Please indicate that either the CM or EM will be a designated professional able to conduct this work/sign off on it.	The Environmental Manager and Mine Manager sign off as an agreement to implement the conditions of the Standard Operating Procedures (SOPs). The SOPs have been prepared by qualified professionals (QPs) and their qualifications will be added to this (and other) plans as a separate row 'Prepared By'. A QP or a qualified person under the direct supervision of a QP will implement SOPs.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2018	Wetlands SOP Section 3	General	LDN/UFN Mikayla Davis		Jul 22, 2022	2	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2019	Wetlands SOP Section 5.1	Clarity	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Site Survey is mentioned multiple times, is this a software that BW Gold will use? If so, adding a sentence on what exactly Site Survey refers to would be helpful.	Site survey refers to the survey team or surveyors (this is common construction terminology).	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	GM; Sept 23	Ready for Publishing
2020	Wetlands SOP Table 5.2-1	Compliance	LDN/UFN Mikayla Davis		Jun 03, 2022	1	New		No	Do not grub within 10m of water bodies where possible, this goes against the commitment of a 30m no disturbance zone around water bodies. As well it goes against the prior statement in section 5.1 of "work or activity conducted within the 30m buffer will only be completed to the extent necessary for safety reason, to control invasive species, or install and maintain erosion and sediment runoff control measures."	The bullet "do not grub within 10 m ..." in Table 5.2-1 (Clearing) will be removed. The expectation for protection/levels of disturbance are more conservative (with the exception of areas within the permitted construction footprint). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 28	Ready for Publishing

2020	Wetlands SOP Table 5.2-1	Compliance	LDN/UFN Mikayla Davis		Jun 03, 2022	2	Follow Up		No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg	RT			Ready for Publishing
2021	Wetlands SOP Table 5.2-1		LDN/UFN Danny Smart		Jun 07, 2022	1	New		No	"ensure that all water and tailings pipelines that interact with or intersect wetlands are raised enough to prevent hydrologic impacts to western toad dispersal but not raised too high that they will limit ungulate movement" Add height distances (precise or a range) to this bullet point	The raised height of the pipeline above the wetland will be determined by qualified professionals and dependent on the pipeline size, site conditions and location. The text will also be refined to allow for other modes to avoid creation of access barriers (such as underpasses or toad salvage). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2021	Wetlands SOP Table 5.2-1		LDN/UFN Danny Smart		Jun 07, 2022	2	Follow Up		No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie	RT		RT; Aug. 7	Ready for Publishing
2022	Wetlands SOP General		LDN/UFN Jessica Lowey		Jun 07, 2022	1	New		No	Please provide a map showing what watercourses will be lost and which will be buffered appropriately.	A figure indicating the watercourses and associated wetlands that will be lost as a result of construction activities and those that will be buffered will be provided in the Wetlands Management Standard Operating Procedure. The figure will also designate approved stream crossings. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	RT/TD to review	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2022	Wetlands SOP General		LDN/UFN Jessica Lowey		Jun 07, 2022	2	Follow Up		No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg	RT		RT; Aug. 7	Ready for Publishing
2023	Wetlands SOP General	Table 4-1	LDN/UFN Jessica Lowey		Jun 07, 2022	1	New		No	How were these values derived? This is a much more simplified version of what is used in the Riparian Management Area guidebook (pasted below).	Table 4-1 of the Wetlands Management Standard Operating Procedure was simplified to include only small and large wetlands and wetland complexes (W1, W3 and W5). However, with the completion of the 2022 Wetland Baseline data collection program, BW Gold will provide the complete list of wetland Riparian Management Area classes and boundaries (i.e.., Riparian Class W1, W2, W4, W4, and W5) in Table 4-1, as indicated in the Riparian Management Area Guidebook. The Riparian Management standard operating procedure will also be updated to include all wetland classes, in addition to the key to riparian classification of wetlands in Figure 12 of the Riparian Management Area Guidebook. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2023	Wetlands SOP General	Table 4-1	LDN/UFN Jessica Lowey		Jun 07, 2022	2	Follow Up	Comment	No	Unable to resolve until we receive an updated SOP. (carry forward)	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing
2024	Coarse Woody Debris SOP Table 3-1	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	"Where non-merchantable logs are available, retain approximately 50 logs or root wads per hectare (equates to approximately 10 m spacing at final application) for reclamation purposes." Is this 50 logs per ha of area cleared? Or 50 logs per ha of area to be reclaimed? How was this number decided upon?	Coarse woody debris (CWD) will be retained for reclamation, as indicated in the introduction to Section 3. The spacing is often a balance of 2 factors: the original density of CWD; and fire risk. Fire risk is often the limiting factor for CWD density. A correction will be made, the 3rd bullet in Table 3-1 states that "all fuel <12 cm must be sold or disposed of... ". This is contradictory to the intent to keep CWD onsite for reclamation works, and is incorrectly stated as being a Wildfire Act requirement. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2024	Coarse Woody Debris SOP Table 3-1	General	LDN/UFN Emma Cooke		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and these additions (spacing/density factors) and corrections are included in the updated SOP.	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 7	Ready for Publishing
2025	Coarse Woody Debris SOP Table 3-1	General	LDN/UFN Emma Cooke		Jun 02, 2022	1	New		No	How will the site-wide inventory of CWD be organized?	The Coarse Woody Debris Standard Operating Procedure will be used to guide the inventory at each proposed reclamation site, following clearing and prior to stripping. The Environmental Manager or a designate will be responsible for coordinating with site personnel to conduct the inventory.	No	LDN/UFN	ERM		Valerie	RT	Ready for Submission	RT: June 28	Ready for Publishing
2025	Coarse Woody Debris SOP Table 3-1	General	LDN/UFN Emma Cooke		Jun 02, 2022	2	Follow Up	Comment	No	Other than the mention: "establish and maintain a site-wide inventory of CWD", the CWD SOP does not provide any other guidance to how this site-wide inventory will be completed and organized. Please provide more detail in the next version of this SOP (including when inventory will be conducted, how data will be organized, etc..)	As stated in Table 3-1 of the Coarse Woody Debris Standard Operating Procedure retention of the Coarse Woody Debris (CWD) will be prioritized to greater than 12 cm diameter and stored within the topsoil stockpile footprint and large CWD stored adjacent to stockpile footprints. An additional bullet will be added to indicate that the Environmental Manager or designate will be responsible for coordinating the inventory with site personnel following additions to the topsoil stockpile. The inventory will include the location of the CWD, size of the CWD, and the volume of the CWD in each storage location. The inventory will be completed following completion of the site clearing and pre-stripping on an annual basis and when material is removed from an existing storage area, with the resulting volume of storage. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 7	Ready for Publishing
2026	CMMP V4 General		LDN/UFN		Jun 11, 2022	1	New		No	Updated to detail the actual distribution and evidence of caribou onsite and in the surroundings	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2027	CMMP V4 General		LDN/UFN		Jun 11, 2022	1	New		No	Outlines the discussion and process leading to the CMMP V4 well.	BW Gold acknowledges this comment.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing

2028	CMMP V4 Page 2-2		LDN/UFN		Jun 11, 2022	1	New		No	Using 95% kernels to assess caribou overlap with the mine is not a suitable way to use GPS collar data, unsure what document you are referencing here, I would be very surprised if the province advised using this method if they did I am sure they will correct this soon.	Defining home ranges using kernel analysis of collar data is a standard method in wildlife biology. As listed in the CMMP Section 2.2, page 2-2, FLNRORD used the kernel method when areas of concentrated use, as described in their letter dated May 16, 2018 and included as Appendix 2 of New Gold's Response to the May 25, 2018 Information Request from the Canadian Environmental Assessment Agency – Updated Assessment of Impacts to Southern Mountain Caribou and Proposed Caribou Offset.	RT/TD to review	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
2029	CMMP V4 Page 4-8		LDN/UFN		Jun 11, 2022	1	New		No	Good coverage of the steps in use of the offset calculation tool	BW Gold acknowledges this comment.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
2030	CMMP V4 Page 4-17		LDN/UFN		Jun 11, 2022	1	New		No	LDN/UFN would then be responsible for conducting the restoration steps for offsetting: - While it is definitely LDN/UFN's intention to lead the restoration program it should still be mentioned that both BC and the Blackwater project will support the work. This may include advice, sharing equipment and logistics when available, and through combining efforts for other research and monitoring programs Blackwater gold are responsible for. Overall BW and BC should commit to facilitating support to increase the restoration outputs that the project is capable of achieving. This should be written in the CMMP for clarity.	BW Gold is committed to maximizing restoration outputs in a manner consistent with the commitments in its CMMP.	RT/TD to review	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT June 26	Ready for Publishing
2031	CMMP V4 Page 6-10		LDN/UFN		Jun 11, 2022	1	New		No	While the pellet counts are 'OK" to start, these are pilot surveys you should acknowledge that the sampling will need revised after the pilot surveys are completed, as the power to detect changes will need to be assessed based on sample collection. Seems likely that more samples will be required and possibly additional controls. Acknowledge that you won't know the final samples until you have relevant pilot data	BW Gold acknowledges the comment. Section 6.2.2.1 already contains a statement regarding power analysis: "After the first year of sampling an analysis will be conducted to evaluate power to detect change, whether there are any updates to the program required and to inform the decision between pellet counts and snow tracks as a long term monitoring tool." Any statements on potential future changes are considered speculation at this point. Updates will be made once analyses are complete and any sampling changes are recommended (i.e.., after the first year of sampling).	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT June 26	Ready for Publishing
2032	CMMP V4 Page 6-12		LDN/UFN		Jun 11, 2022	1	New		No	Schedule - Pellet counts should be conducted in spring on snow melt so that accumulated pellets can be surveyed and vegetation cover doesn't restrict pellet sightability.	BW Gold acknowledges the comment. Pellet counts will be conducted in spring/summer; methods include surveyors searching the ground for pellets, and given the size of pellet piles for both caribou and moose, it is not considered likely that sightability will be a problem.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT June 26	Ready for Publishing
2033	CMMP V4 Section 6.4		LDN/UFN		Jun 11, 2022	1	New		No	The study area is the mine site, transmission line, Project access roads, and securement areas Comment: "Including the area of influence?"	Incidental observations will be collected and reported from all work/surveys happening for the Project, including those outside of the stated mine site areas. However, the focus of incidental observations for monitoring input will be centered on the stated study area (mine site, transmission line, Project access roads and securement areas). No changes to the document are planned.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
2034	CMMP V4 Section 6.6		LDN/UFN		Jun 11, 2022	1	New		No	Aircraft will be managed to reduce disturbance to caribou including maintaining a minimum elevation of 400 m above Mt. Davidson, unless as part of a permitted wildlife survey Comment: reviewers have repeatedly asked for 500m to be used here (last time Duncan McCall, please change this distance to the 500m that all others think it should be according to regulations and contempory opinion?"	No change is planned at this time. The Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia (FLNRO 2014) indicates: "6.8.2. 400 m above ground level over-flight elevation and no circling for all winter range, mineral licks and for birthing areas."	RT/TD to review	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
2035	CMMP V4 Page 6-12		LDN/UFN		Jun 11, 2022	1	New		No	The CMMP adequately covers the permit information requirements, requirements for caribou restoration, recovery and monitoring and the concerns previously voiced by the nations regarding the loss of caribou habitat. Although the CMMP should continue to be updated with new information, the current document CMMP-V4 covers caribou mitigation and management issues well.	BW Gold acknowledges this comment.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2036	CMMP V4 Section 1.1	General	LDN/UFN		Jun 11, 2022	1	New		No	First and second paragraph "Rangifer tarandus caribou" should be all italicized.	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2036	CMMP V4 Section 1.1	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2037	CMMP V4 Section 2.2	General	LDN/UFN		Jun 11, 2022	1	New		No	Same as above - italicize species name.	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2037	CMMP V4 Section 2.2	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2038	CMMP V4 Section 2.4.1	Typo	LDN/UFN		Jun 11, 2022	1	New		No	habitat disturbance exceeds the 35% limits set in the Recovery Strategy, so any remaining habitat is highly valuable and HEWR is irreplaceable	This is a quote from Section 2.4.1, Page 2-8. There is no question.	RT/TD to review	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
2039	CMMP V4 Section 2.4.2	Typo	LDN/UFN		Jun 11, 2022	1	New		No	The characterization of habitats is consisted with the descriptions in the EA…	Assuming the comment should read "is consistent". BW Gold acknowledges this comment.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 24	Ready for Publishing
2039	CMMP V4 Section 2.4.2	Typo	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2040	CMMP V4 Section 2.4.2	General	LDN/UFN		Jun 11, 2022	1	New		No	Restoration and reclamation are used interchangeably. BW Gold has updated the use of these terms in the current version of the CMMP. It's not clear if this has been updated - both restoration and reclamation are used to describe the work to be completed on linear kilometers of roads.	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2040	CMMP V4 Section 2.4.2	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2041	CMMP V4 Section 3.2	General	LDN/UFN		Jun 11, 2022	1	New		No	Minimizing disturbance due to noise through the use of noise abatement technology, equipment placement, regular equipment maintenance, and enforcing speed limits Typo. Also, could use a reference to the Noise and Vibration Effects Monitoring and Mitigation plan.	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 26	Ready for Publishing
2041	CMMP V4 Section 3.2	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing

2042	CMMP V4 Section 3.2	General	LDN/UFN		Jun 11, 2022	1	New		No	Same as above comment - could be helpful to provide references to other plans (including Vegetation Management Plan,	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 26	Ready for Publishing
2042	CMMP V4 Section 3.2	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2043	CMMP V4 Section 3.3	General	LDN/UFN		Jun 11, 2022	1	New		No	Using native or non-native, weed-free seed - Should clarify that native seed mixes will be prioritized and non-native seeds only used under certain scenarios.	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 28	Ready for Publishing
2044	CMMP V4 Section 3.3	General	LDN/UFN		Jun 11, 2022	1	New		No	Being informed by the Recovery Strategy for Woodland Caribou, Southern Mountain Population (Rangifer tarandus caribou) in Canada Italicize species.	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2044	CMMP V4 Section 3.3	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2045	CMMP V4 Section 5	General	LDN/UFN		Jun 11, 2022	1	New		No	BW Gold will provide the data collected in support of this program in summer 2021. Have the results of this program been provided/included anywhere yet? Provide a reference to the location here, if so.	The 2021 Wildlife Pre-Construction Monitoring Report will be released following review and completion. BW Gold will provide this document to the UFN/LDN.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 28	Ready for Publishing
2046	CMMP V4 Section 6.1.3	General	LDN/UFN		Jun 11, 2022	1	New		No	Monitoring effectiveness of habitat securement measures: will be addressed through the process of periodic reviews of the habitat securement measures What will these reviews cover? More detail on scope, timing, frequency of these reviews? Would part of this effectiveness monitoring include monitoring caribou use of the securement area?	The review of habitat securement measures is an administrative process. Caribou use of the securement may be one metric to evaluate whether the securement is an effective means of offsetting the project effects. The CMMP, Section 6.5 Monitoring Effectiveness of Habitat Securement Measures states: "As outlined in Section 4.3, BW Gold has committed to defer the rights associated with the mineral tenures in the Capoose securement area for a period of 50 years. It is anticipated that the deferral will be reviewed collaboratively by representatives of UFN, LDN, the federal and provincial governments, and BW Gold every 10 years, with an additional review period targeted in advance of mine closure. Those reviews will include an assessment of the effectiveness of the habitat securement measures and whether such measures continue to be an effective means to address the Project's adverse effects on the conservation and recovery of the Tweedsmuir herd and its critical habitat."	RT/TD to review	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 28	Ready for Publishing
2047	CMMP V4 Figure 6.2-3/4	General	LDN/UFN		Jun 11, 2022	1	New		No	These figures could use better map elements (north arrow, scale bar, legend, etc... - what are the yellow pins labelling?)	BW Gold will make the suggested revision. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2047	CMMP V4 Figure 6.2-3/4	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Thank you for your response. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2048	CMMP V4 Figure 6.2-5	General	LDN/UFN		Jun 11, 2022	1	New		No	Similar to above - legend is illegible.	BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	CB; 21-Jun	Ready for Publishing
2048	CMMP V4 Figure 6.2-5	General	LDN/UFN		Jun 11, 2022	2	Follow Up	Comment	No	Similar to above - legend is illegible.	BW Gold will make the suggested revision the next time that the CMMP is updated, per the previous response to 2048.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2049	CMMP V4 Table 6.3-1	General	LDN/UFN		Jun 11, 2022	1	New		No	Does the "High" category have its own management response? It is unclear if the "medium" orange category is a response to low, medium, and high categories. (same comment for a few of the following tables as well)	The response to both "Medium" and "High" is the same; the table rows are merged to indicate that the response would be the same for both categories.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 28	Ready for Publishing
2049	CMMP V4 Table 6.3-1	General	LDN/UFN		Jul 22, 2022	2	Follow Up	Comment	No	Does the "High" category have its own management response? It is unclear if the "medium" orange category is a response to low, medium, and high categories. (same comment for a few of the following tables as well)	In Table 6.3-1, the None trigger has a specific management response, whereas the management response for Low, Medium and High all involve investigations into why the restoration methods aren't working followed by suggested management actions. It is noted that the colour use for the management response is the same as the Medium trigger and this will be updated in the next version of the CMMP to remove confusion. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Rolf/Greg		Ready for Submission	RT; Aug. 11	Ready for Publishing
2050	CMMP V4 Table 6.3-5	General	LDN/UFN		Jun 11, 2022	1	New		No	Management response: "Identify additional mitigation options and apply them." More detail could be provided on what sort of mitigation measures could be applied, even if just examples.	Table 6.3-5 Triggers and Management Responses for Wildlife Observations indicates that under a Low level trigger, the first step is to "Review if vegetation growth, access or sight line mitigation is effective" and applies additional mitigation after that review is complete. BW Gold will make the suggested revision the next time that the WMMP is updated. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.	No	LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT: June 28	Ready for Publishing
2050	CMMP V4 Figure 6.3-5	General	LDN/UFN (Emma Cooke)		Jul 22, 2022	2	Follow Up	Comment	No	Please ensure comment is carried forward and revisions are included in the updated management plan	Per the previous response to 2050, BW Gold will make the suggested revision the next time that the WMMP is updated.		LDN/UFN	ERM		Rolf/Greg	RT	Ready for Submission	RT; Aug. 11	Ready for Publishing

2051	Chapter 6 Environmental Assessment Predictions, Section 6.2.4	General	LDN/UFN (Brenley Yuan)		Jul 22, 2022	1	New		No	If project components are classified as "1 - low to moderate interaction with RC", and mitigation measures do not adequately address negative impacts, a residual effects analysis should still be completed.	The effects assessment methodology used in the Joint Application is consistent with methodologies used in the EA for this Project and with methodologies used by other projects in both EA and permitting. This approach serves to narrow the focus of the effects assessment to interactions or effects pathways that have the highest potential to cause adverse effects as these higher risk interactions or effects pathways are the ones that will drive the characterization of residual effects to a receptor component. A minor or moderate interaction does not imply that an effect would occur. If an effect were to occur, it would be low risk, as described in Section 6.2.4. Where an interaction of "1" was identified, explanation for why this interaction was not carried forward for further assessment was provided (for example, see Section 6.3.2.1 [Aquatic Biota], specifically the paragraph after the interaction table). No additional characterization is required, since these low risk potential effects would not be the driver of residual effects to the receptor components (i.e., relative to other effects pathways, the interactions or effects pathways ranked as a "1" would be negligible and would not affect the residual effects characterization).		LDN/UFN	Lorax	Entia			Ready for Submission	RT; Aug 2	Ready for Publishing
2052	Chapter 6 Environmental Assessment Predictions, Section 6.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	Follow Up	Comment	No	"The assessment of effects to Fish and Fish Habitat evaluates changes in habitat loss and flow associated with Project activities." (page 6-14) Please clarify in this sentence the difference between effects to Fish vs. effects to Fish Habitat. You have lumped them together in this sentence, but are treated as separate in Table 6.3-1. Please include, at the very least, death, and indirect and direct harm to fish under "effects to Fish".	Section 6.3 Aquatic Environment currently states the assessment of effects to Fish and Fish Habitat evaluates changes in habitat loss and flow associated with Project activities.As discussed in Section 6.3.2.2 Fish and Fish Habitat, during the Construction phase fish salvages will occur in all water bodies affected by the Project footprint. Fish salvages will help to avoid fish death in the Project area by removing and relocating all potentially affected fish. Potential direct (e.g., TSF discharge to Davidson Creek) and indirect effects (stream flow changes) to fish upstream and downstream of the Project were assessed by evaluating potential changes to fish habitat. A clarification of the quoted text of Section 6.3.2.2 is, 'The assessments of effects to Fish and Fish Habitat evaluate lethal or sub-lethal effects on fish and changes in fish habitat due to direct area loss and altered flow regimes associated with Project activities'.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2053	Chapter 6 Environmental Assessment Predictions, Table 6.3-1	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Clarification	No	In Table 6.3-1, "Operation of exploration camp" (under Construction phase), and "Operation of operations camp, sewage treatment systems, and potable water treatment plant" (under Operations phase) should be classified as "1" for Aquatic Biota to account for trace contaminants in waste water effluent.	Thank you for the recommendation. We will consider these comments and stated preferences in the future; however, no changes are being made to the way the information has been presented in the Application at this time.		LDN/UFN	Lorax					GM; Aug 11	Ready for Publishing
2054	Chapter 6 Environmental Assessment Predictions, Table 6.3-2	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	In Table 6.3-2, the last line item in "Freshwater Reservoir", the mitigation target should be adjusted to: "Maintenance of Instream Flow Needs (IFN), a natural hydrologic regime, and a 2-year flood flow occurring once every 2 years during freshet." The 2 year flood flow is required to maintain channel stability and natural sediment transport dynamics.	As described in IR 2144, the Instream Flow Needs (IFN) flow regime has been designed to include annual flushing flows in Davidson Creek during freshet periods, not every second year as requested in this IR comment. This flow period coincides with the typical freshet period observed at the site and has been calculated to entrain and remove fine sediments which have accumulated along the bed of the stream during low flows and to 'clean' gravels that may offer spawning habitat. Sections 3.6.3 and 4.1.2 of the IFN memo provides more detail on flushing flows and discharge calculations (Blackwater Fisheries Offsetting Plan - Instream Flow Needs for Davidson Creek, Palmer, 2021).		LDN/UFN	Palmer					TD, Aug 16	Ready for Publishing
2054	Chapter 6 Environmental Assessment Predictions, Table 6.3-2	General	LDN/UFN (Brenley Yuan)		30-Aug-22	2	Follow up	Comment	No	Thank you for providing the IFN memo. The reviewer has 2 follow up comments: 1) Please provide details on how the critical velocity analyses were conducted to arrive at the flushing flow of 0.56 m3/s. Specifically, did the analyses take into account local creek geometries, including cross-sectional profiles and slope? 2) The entrainment of coarse sands should not be the only consideration in determining annual flushing flows. These annual flushing flows will become the new "channel forming flows" and will have impacts to other physical characteristics of the channel. In natural systems, the channel forming flows are typically a 2-year flow in streams with a glaciated history. This flow is highly related to a creek's average bankfull widths, meander curvature, and riffle-pool spacing (Kellerhals and Church 1989, Newbury 2015). The relationship between bankfull width (w) and 2-year flow (Q) is summarized in the equation w=4.5 (Q)^0.5 (Kellerhals and Church 1989). Bankfull widths measured in baseline studies (Appendix 2-O, page 185. Table 5.8-2) were generally between 5-7 m in lower Davidson Creek. Using the equation presented, this corresponds to a channel forming flow of 1.2-2.4 m3/s. This closely matches the median freshet streamflow of ~1.5 m3/s measured in baseline studies. Therefore, we recommend keeping the initial planned flushing flow of 1.12 m3/s (Table 3 in IFN memo) to better mimic natural channel forming flows. If this flow is reduced to 0.56 m3/s, we can expect to see channel instability and negative impacts to the creek geomorphology, such as tightening of meander curves (and associated erosion/gravel bar formation), creation of new deposition zones, reduced ability to transport sediment inputs from hill-slope processes, and reduced ability to deliver spawning gravel-sized substrate from upsteram to downsteram areas. Sources: Kellerhals, R and M. Church. 1989. The morphology of large rivers: characterization and management. in D.P. Dodge (ed.) Proc. of the International Large River Symposium. Canadian Fisheries and Aquatic Sciences Special Pub. 106. Ottawa ON. Newbury, R. 2015. Stream Restoration Hydraulics: Project Casebook. Canadian Rivers Institute.	1. The methods for determining entrainment thresholds and, subsequently, flushing flows for Davidson Creek are outlined in Section 3.6.3 of the technical memorandum prepared by Palmer titled 'Instream flow needs for Davidson Creek'. Additional details on how the entrainment thresholds were calculated are provided below. Fluvial geomorphological reconnaissance and data collection (e.g., longitudinal bed profile, cross-sections, pebble counts) was completed by Palmer along Davidson Creek immediately downstream of the proposed FWSS on August 18, 2016 (daily discharge was 0.14 m3/s). Palmer surveyed a longitudinal bed profile to document energy gradients and key slope breaks. Bankfull cross-sections in representative morphological units (e.g. riffle, pool, glide) were also surveyed and 'tied-in' into the longitudinal profile. The bed sediment gradation was quantified using Wolman (1954) pebble counts. The measured bed slope was 1.0%. Average cross-section bankfull depth and width were 0.5 m and 5.2 m, respectively. The bed material was dominated by gravels and cobble (D50 = 42 mm). Very coarse sands were observed in the interstitial spaces between larger particles. Deposits of silt, fine sand, and/or medium sand was not observed in the reach as they would likely be transported downstream in suspension (Church 2006). To help determine an appropriate 'flushing flow' for Davidson Creek, sediment entrainment thresholds were established for coarse to very coarse sand (up to 2 mm) within the surveyed reach. Palmer used both critical shear stress (Shields (1936) as presented by Church (2006)) and critical velocity (Hjulstrom 1935) protocols. Results of the critical shear stress analyses suggest coarse sands and very coarse sands are entrained at flows well below mean annual discharge (MAD is 0.38 m3/s) The critical velocity analyses indicated coarse sands are entrained at a discharge of approximately 0.26 m3/s (i.e., below mean annual discharge) and very coarse sands are entrained at a discharge of approximately 0.49 m3/s (i.e., slightly above mean annual discharge). These findings suggest that the flow of 0.56 m3/s, which is prescribed to provide habitat for adult rainbow trout throughout May and June is also capable of entraining and transporting fine sediments. Further information on the calculation of this flow is provided in the IFN memo (Blackwater Fisheries Offsetting Plan - Instream Flow Needs for Davidson Creek, Palmer 2021) . As the IFN to provide adult rainbow trout habitat is greater, it is also a suitability conservative flushing flow. Therefore, a separate flushing flow is not required. 2. The exercise described in our memo and in our response above was to establish flows capable entraining and transporting (i.e., flushing) fine-grained sediments. The flushing flow of 0.56 m3/s represents the minimum flow in Davidson Creek downstream of the FWSS in May and June. Flows may exceed this value periodically during spring freshet after water management infrastructure in Davidson Creek has been filled to capacity. Flushing flows are not meant to perform significant geomorphic work.		LDN/UFN	Palmer				Ready for Sub	TD, Sept 19	Ready for Publishing
2054	Chapter 6 Environmental Assessment Predictions, Table 6.3-2	General	LDN/UFN (Brenley Yuan)		06-Oct-22	3	Follow up	Comment	No	Thank you for the detailed response. Is there flexibility to adjust flushing flows once the water management structure is filled to capacity? There is still sediment supply in the form of hillslope processes and bank erosion over time. Having the flexibility to adjust flushing flows based on monitoring results would allow for adaptive management/learning based on how the creek responds.	As indicated in the previous response, flows may exceed the minimum flushing flow of 0.56 m3/s periodically during spring freshet after water management infrastructure in Davidson Creek has been filled to capacity. Since the FWR has the ability to provide water at a greater flow rate than 0.56m3/s, it will have the ability to release flows above this flushing flow rate. Additional release will depend on the availability of additional water and predicted need to meet the IFN in coming months. Whether flushing flows above 0.56 m3/s are required, based on monitoring results, will be discussed with the Nations and regulators. BW Gold is also cognizant of the need to balance flows released into Davidson Creek to meet the IFN and sediment transport needs against water extracted from Tatelkuz Lake (and subsequently Chedakuz Creek) via the FWSS. In support of achieving this balance, a framework is currently in development to describe management of site-wide water management infrastructure in conjunction with flow requirements in affected watercouses (e.g., Davidson Creek, Tatelkuz Lake, Chedakuz Creek). Please see the comment response to IR 497 for further information on this topic.		LDN/UFN	Palmer					TD, Oct 24	Ready for Publishing
2055	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.1	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Comment/question	No	Although changes in groundwater water quality may not be the main pathway by which aquatic biota are negatively impacted, it could still contribute trace amounts of contaminants into waterways, potentially accumulating over time. I understand groundwater modelling was conducted. Please add results from groundwater modelling and how aquatic biota will be or will not be affected.	The Life of Mine Water Balance/Water Quality Model incorporates seepage pathways. Therefore, the predicted surface water quality at mine nodes as well as receiving environment nodes in Davidson Creek, Creek 661, and Chedakuz Creek presented in the Application inherently reflects modelled groundwater contributions.		LDN/UFN	Lorax					GM; Aug 4	Ready for Publishing

2056	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Comment/question	No	What additional POCs would have been identified if 10% above the 95th percentile would have been used instead of 20%? If additional POC's are identified using lower thresholds, I think there are reasonable grounds to include them in the list as well.	No, the POCs that were identified in the Application Conceptual Site Model (Section 5.10) and carried forward to the aquatic effects assessment would not have changed if a 95th percentile + 10% baseline concentration was used to screen values. Further, an updated evaluation of POPCs and POCs is presented in the below memorandum generated as part of Round 1 comment responses: Memo: **R1_ENV Comment ID 99.pdf** Appendix: **R1_ENV Comment ID 99 Appendix B.xlsx** The POPC screening approach described in this memo places less emphasis on screening out parameters based on background concentrations, per comments received from ENV reviewers in the Application Review Round 1.		LDN/UFN	Lorax					GM; Aug 11	Ready for Publishing
2057	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Comment/question	Yes	Total Phosphorus (TP) a coarse monitoring parameter for eutrophication, as it contains forms of phosphorus that are unavailable for biological uptake. Monitoring of TP produces meaningless data. It is soluble reactive phosphorus (SRP; orthophosphate) that you want to use as a monitoring parameter, as that is the molecule that is taken up by algae. It is recommended that SRP levels be collected for baseline and monitored moving forward.	The effects assessment for phosphorus relied on total phosphorus concentrations because the CCME guideline uses total phosphorus to define trophic status. Both total phosphorus and orthophosphate concentrations have been measured in baseline surface water quality programs since 2011 (see Appendix 2-K). Orthophoshate is also included as a parameter in the laboratory analysis of surface water quality samples under the AEMP Plan (see Table 6.2-1 of the AEMP in Appendix 7-A).		LDN/UFN	Entia				Ready for Submission	RT; Aug. 2	Ready for Publishing
2058	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	On page 6-51, the document states that "Modelling indicates that the alterations in streamflow in Creek 705 and Creek 661 will be less than 5% (KP 2021b) and within natural range and therefore will not be assessed further here." However, upon review of Chapter 2 baseline flow data and Chapter 5 modelling results, it appears that Creek 661 will likely experience complete dewatering during the winter, which will cause losses to important overwintering habitat identified in lower Creek 661. Please see below for data sources: Chapter 2, Appendix 2-O: identification of overwintering habitat in lower Creek 661 Chapter 2, Section 2.6.2: identification of Mt. Davidson groundwater being the main source of surface water in winter. Chapter 2, Appendix 2-I: baseline flow data showing winter flows as low as 2-3 L/s (Table A 4.1) in Creek 661. Chapter 5, page 5-154: model prediction of a 5 L/s reduction of groundwater contribution to flows in Creek 661 tributaries. Groundwater flow is extremely important, even if a small amount, to overwintering habitat by providing above-freezing temperature flows. Loss of this contribution will result in freezing, dewatering, and ultimately, loss of overwintering habitat. This should first be mitigated for through flow augmentation, and second offset for habitat loss if there are still residual effects after mitigation. Please address this comment in a memo.	Chapter 5 modelling does indicate a groundwater flow reduction of 5 L/s for Creek 661 during Operations to pit dewatering. However, according to the life of mine watershed model predictions (Appendix 5-B Table E3.3), the monthly flow reductions during Operations phase winter low flows will be from 22 to 13 L/s (Model Node H11 - located on Creek 505659, a tributary of Creek 661), and from 3 to 1 L/s (Model Node H1 - located in upper Creek 661 upstream of its confluence with Creek 505659) for the two modelled nodes in upper Creek 661. These reductions do not indicate complete winter dewatering. Flow reductions in lower Creek 661 (Model Node 1-661, 8 km downstream of H1 and H11) are predicted to be from 59 to 48 L/s during winter low flows, which is unlikely to cause significant losses to overwintering habitat. It is stated on page 6-51 that creeks 661 and 705 will continue to be monitored within the AEMP (Appendix 7-A, Aquatic Effects Monitoring Plan) to address uncertainty in the model.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2058	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		18-Aug-22	2	Follow up	Information requirement	No	Thank you for your response. Based on the winter low flow reductions provided in your response, have reductions to overwintering water depths in the main channel and offchannel habitats been included in the calculation of offsetting measures?	As indicated in Section 6.3.4.4 Residual Effects to Fish and Fish Habitat, there is a predicted loss of 860 Rainbow Trout HU and 563 Kokanee HU in Davidson Creek and Creek 661 due to instream flow changes. These changes include winter stream flow reductions.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2059	Appendix 9-B Soil Management Plan Section 6	Training and Awareness	LDN/UFN (Mikayla Davis)		Jul 27, 2022	1	New	Clarification	No	Please indicate the "environmental team" who will be providing training are appropriately qualified professisonals with experience in soil management in the revised plan. The SMP mentions that QPs will be supervising salvage operations, but does not explicitly state that training will be delivered by a QP.	Section 6 of the Soil Management Plan will indicate that the training will be provided by a qualified professional in the next iteration of the Soil Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
2060	Appendix 9-B Soil Management Plan Section 6	Training and Awareness	LDN/UFN (Mikayla Davis)		Jul 27, 2022	1	New	Comment	No	Request that a commitmment be added to the SMP stating that BW Gold will have ongoing consultation with LDN and UFN on the development of the "training and awareness plan".	The proposed training topics are included in Section 6 of the Soil Management Plan and are therefore included as part of this comment response (consultation) process. BW Gold would be pleased tp share a copy of the training and awareness program with LDN and UFN for their review when it has been prepared and will add some text to the plan to reflect this. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Valerie		Ready for Submission	RT; Aug 7	Ready for Publishing
2061	Appendix 9-B Soil Management Plan Section 8.1	Reclamation Materials Balance	LDN/UFN (Mikayla Davis)		Jul 27, 2022	1	New	Comment	No	"BW Gold intends to complete site-specific research to support an engineered cover over the tailings beaches in lieu of a complete water cover with the intent of moving towards a drier TSF". When will site specific research be conducted, is there a preliminary work plan for this research? If not, we request to have a commitment for BW Gold to have ongoing consultation with LDN and UFN on the development of the research plan. Additionally previous comments were made about restoring the wet ecosystems previously found in the project footprint as they are crucial for caribou habitat. BW Gold's response was to remove all reference to caribou and creating drier ecosystems in the SMP. Please explain how stating "moving towards a drier TSF" meets the previous commitments made by BW Gold regarding removing statements like this.	BW Gold has yet to define the preliminary workplan and workplan elements pertaining to the research required to inform the approach(es) to an engineering cover for achieving a "drier" TSF cover. Relamation research is discussed in Section 4.2.5 in Chapter 4 (Reclamation and Closure Plan) of the Application. Field-based research requires tailing materials following the start of operations both in sufficient volume and locations that can support the research trials (see Section 4.2.5 in Chapter 4). As with all facets of developing the end land use plan, BW Gold is committed to involvement of LDN and UFN in development of the research plan concerning the final TSF beach cover. The research group will be interdisciplinary in nature to enable integration of expertise in geotechnical, geochemical, hydrological, ecohydrological and vegetation to be achieved.BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement. The Soil management Plan (SMP) purpose (Appendix 9-B; Section 2.1) is to describe soil management activities that will provide soil for mine site reclamation, including salvage, stockpiling, and placement of reclamation materials. The SMP provides a reclamation materials balance based on the availability of materials for salvage and the projected reclamation materials demand for mine closure materials. Reference to caribou and creating drier habitats have been removed in the SMP because discussion of caribou habitat in relation to post-mine ecosystem objectives is provided in Chapter 4 Reclamation and Closure Plan (for example the post-mine land capability described in Section 4.1.2.2 of Chapter 4)		LDN/UFN	ERM	IEG	Rolf	RT	Ready for Submission	AT, Aug 16	Ready for Publishing
2061	Appendix 9-B Soil Management Plan Section 8.1	Reclamation Materials Balance	LDN/UFN (Mikayla Davis)		26-Aug-22	2	New	Comment	No	The first paragraph of this response can be considered closed and a carry forward as the Nations will want to engage in consultation and review the research plan once it is developed. However the second paragraph is not resolved. The statement "moving towards a drier TSF" is currently in the soil management plan, and no commitment has been made by Artemis to remove it based on the response given. Please remove it. Further the section referenced in chapter 4 (4.1.2.2.) does not address the original comment. Artemis committed to removing reference to creating drier ecosystems and section 4.1.2.2. states "Glaciofluvial surface soils are to be targeted for salvage to restore drier, open-forest site series with lichen favoured by caribou". There is no mention of restoring wet ecosystems for caribou. Requesting that a commitment be made by Artemis to restore both dry and wet ecosystems to benefit caribou. This revision can be made in the End Land Use Plan.	Please note that the The Soil management Plan (SMP) purpose (Appendix 9-B; Section 2.1) is to describe soil management activities that will provide soil for mine site reclamation, including salvage, stockpiling, and placement of reclamation materials and not intended to be geared towards dicussion of habitats - as is detailed in the Reclamation and Closure Plan. As with all facets of developing the end land use plan, BW Gold is committed to involvement of LDN and UFN in development of the research plan concerning the final TSF beach cover, and further discussion on approaches to create suitable habitat for caribou are also anticipated. Accordingly, there is no final decision on the beach cover at this time. The research group will be interdisciplinary in nature to enable integration of expertise in geotechnical, geochemical, hydrological, ecohydrological and vegetation to be achieved.BW Gold will continue to consult with LDN and UFN in accordance with the terms and conditions of our participation agreement.		LDN/UFN	ERM	IEG	Rolf		Ready for Submission	TD, Sept 14	Ready for Publishing

2062	Appendix 9-B Soil Management Plan Section 12	Monitoring	LDN/UFN (Mikayla Davis)		Jul 27, 2022	1	New	Comment	No	Please explicitly state that a QP will be responsible for monitoring as required by the early works permit.	Section 12 of the Soil Management Plan (SMP) summarizes the monitoring to be completed and refers to the section within SMP (e.g., Section 9.1.2) or other management plan where monitoring is detailed. Statements regarding responsibility of a qualified professional will be indicated in the referenced section. In some cases the qualified professional will direct the program (e.g., qualified professionals will supervise soil salvage, soil stockpiling and placement of soils, and direct the sampling program to capture the range of variability in surface soil properties.) or a qualified professional is required to complete the monitoring (e.g., reference to monitoring of the suitability of applied reclamation materials in the research trials and progressive reclamation detailed in the Reclamation and Closure Plan). Permit requirements will be adhered to.		LDN/UFN	ERM		Tonia/Valerie	RT	Ready for Submission	RT/TD: Aug 16	Ready for Publishing
2062	Appendix 9-B Soil Management Plan Section 12	Monitoring	LDN/UFN (Mikayla Davis)		26-Aug-22	2	New	Comment	No	While section 9.1.2 does reference a QP being responsible for supervising soil salvage, soil stockpiling, placement of soils, and directing the sampling program, there is no mention of the QP conducting stockpile inspections, application, or monitoring reclamation performance as described in section 12. I acknowledge that this will be added to the Reclamation and Closure Plan (a plan we have not received for review), however a commitment needs to be included in the SMP regardless.	The reclamation and closure plan is Chapter 4, which was submittted to LDN and UFN during pre-application activities, during screenign and again as part of the re-submission of the MW's application in March 2022. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Tonia/Valerie		Ready for Submission	TD, Sept 14	Ready for Publishing
2063	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	Modeled dissolved aluminum concentrations in Davidson Creek in the summer/fall are elevated from baseline, approach closely to SBEB levels and exceed both long-term and short-term WQG. This is close enough to warrant the propoent to describe residual effects to fish and mitigation options in the event that the model underestimated aluminum concentrations.	Concentrations of D-Al in Davidson Creek and Creek661 are naturally above short- and long-term WQGs in certain months. The months in which these exceedances occur vary from year to year within the baseline period (and will continue to vary in background waters once Project development commences). However, the seasonal SBEBs are proposed to generally capture Al concentration trends observed over the baseline period. It is reasonable to assume aquatic biota in the Project area are acclimated to the naturally elevated D-Al conditions, as well as interannual variability in the months in which background Al exceeds its WQGs. For this reason, predicted D-Al concentrations that fall below the proposed SBEB are not anticipated to result in residual effects to aquatic receptors (including fish). As such, there are no residual effects to describe.		LDN/UFN	Lorax					GM; Aug 12	Ready for Publishing
2063	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		27-Jul-22	2	Follow up	Information requirement	No	literature suggests that D-Al toxicity is highly related to pH levels. While the toxicity of D-Al is low in waters with pH > 6, toxicity greatly increases in pH < 6. In low pH, the predominant Al forms are positively charged and bind to fish gills, which impairs respiration. This is particularly the case between the pH range of 5-6. Toxicity of D-Al in waters with pH <5 still cause deleterious effects, but to a lesser extent than pH between 5-6. Dennis and Clair (2012) cite the following guidelines: "Based on an extensive review of existing toxicological and geochemical literature, the European Inland Fisheries Advisory Commission (EIFAC) recommended that for protection of aquatic life, Ali (ionic Aluminum) should not exceed 15 µg·L–1 at pH levels between 5.0 and 6.0 (Howells et al. 1990)." "Howells et al. (1990) therefore recommended that 30 µg·L–1 be used as a harmful Ali (ionic Aluminum) criterion in waters with pH < 5.0". These equate to 0.015 mg/L for pH 5-6, and 0.03 mg/L for pH <5. Therefore, different SBEB's should be set for different pH ranges. Current fish populations are likely able to tolerate elevated D-Al levels in the project area because current pH values are well above 6. However, if pH were to dip below 6, there is major concern for D-Al to turning into positively charged forms and binding with fish gills. The chemistry of D-Al suggests that this could be a "light switch" effect when all of a sudden, waters turn toxic. This would be on top of stressors related to low pH. Based on the naturally elevated D-Al levels, it may be easier to focus on tightly regulating pH levels rather than to reduce D-Al levels. However, the reviewer was unable to find any pH predictions in the receiving environment during mine operations. Under Chapter 5, there is mention of system in place to regulate pH, and proposed targets of 6.5-9 pH for mine discharges, but this does not replace pH predictions in receiving environments. In summary, the reviewer has the following 2 requests: 1) include different SBEBs for different pH ranges using values provided in literature (i.e. 0.015 mg/L for pH 5-6, and 0.03 mg/L for pH <5) 2) provide pH predictions for receiving WQ stations and assess whether there will be predicted D-Al toxicity related to low pH.	Condition 26 of the Environmental Assessment Certificate requires BW Gold to ensure that the Project does not cause water quality to exceed BC water quality guidelines in Davidson Creek and Creek 661, which includes ensuring that discharges from the Project do not cause pH to go outside of the range of 6.5 to 9.0. pH is not predicted as part of mass-balance water quality modelling which has been used for this Project (as is typical for these types of models). pH controls are integrated within the source terms, however, and are considered as part of source term development. pH is one of the factors considered in the operational requirements and discharge monitoring for water treatment plants. pH is a parameter that is reasonably straightforward to control as part of water treatment processes. pH will be continuously monitored using inline sensors in water treatment plants (WTPs; i.e., the metals WTP, lime neutralization system, membrane WTP), including in effluent from each WTP, as part of operational monitoring under the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). pH monitoring is also included for both effluent at the end of pipe (prior to discharge), as described in the MSDP (Appendix 8-E), and in water quality sampling of the receiving environment (both in site measurements and laboratory analysis), as described in the AEMP Plan in Appendix 7-A. For these reasons, an SBEB for pH levels below 6.0 is not proposed.		LDN/UFN	Lorax				16-Sep	GM; Sept 16	Ready for Publishing
2063	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		06-Oct-22	3	Follow up	Information requirement	No	Thanks for your response indicating that pH will be closely monitored at the WTP stage. This leads to the next question: are there systems in place for monitoring leading indicators from the sources vs reacting to lagging indicators at WTPs? Are you tracking and auditing NAG/PAG locations and characteristics (including TSF walls), monitoring for evolving waste rock material, and monitoring pore-gas conditions in landforms containing NAG/PAG? Since there are high consequences to fish at the lower pH range, it is important that compliance with condition 26 is proactively managed. Secondly, when approaching the lower pH discharge range, what specific controls do you have in place to deal with this?	a) The occurrence of ARD is expected to occur within 1 year for most PAG exposures, and will be managed accordingly. The timing of ARD onset from individual facilities will be monitored through seepage monitoring, which can detect evolving geochemical conditions before they are manifested in WTP influent. b) Material movement of PAG and NPAG mine rock will be tracked throughout mine life (9-D MLARD Management Plan) c) Pore gas monitoring is not currently proposed d) The pH of mine water at the site will be managed through submergence of PAG tailings and waste rock within the TMF, treatment of acidic drainage from LGO stockpiles, and segregation of NAG waste rock and overburden for construction purposes (9-D MLARD Management Plan, 9-E Mine Water & Discharge Management Plan)		LDN/UFN	Lorax				Ready for Submission	GM; Oct 17	Ready for Publishing
2063	Chapter 6 Environmental Assessment Predictions, Section	General	LDN/UFN (Brenley Yuan)		17-Nov-22	4	Follow up	Information requirement	No	In terms of not committing to internal gas monitoring, it is acceptable given that it is NAG material the proponent is talking about, and not NAG material in an ex-pit unsaturated facility. The reviewer notes that while seepage water monitoring is a leading indicator with respect to WTPs, it is a lagging indicator of waste storage facility performance. Are there plans to measure earlier indicators of water storage facility performance?	a) Comment acknowledged. b) Monitoring of facility drainage chemistry will be facilitated by the collection of seepage and groundwater proximal to the source. This form of monitoring applied immediately downgradient of a facility is considered industry best practice for identifying facility scale changes in water quality. Mine site water will be monitored per the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application). As described in this plan, monitoring locations include but are not limited to the pit sump, LGO stockpile collection pond, and upper and lower waste stockpile collection ponds. Monitoring at these locations will provide an earlier indication of performance.		LDN/UFN	Lorax					RT; Nov 23	Ready for Publishing

2064	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	There appears to be a lack of baseline data for March and December for dissolved aluminum concentrations in Creek 661. Averaging of February and April values is not approrpiate for March since April is in freshet and presents very different conditions. I agree that ongoing monitoring of December baseline data is needed. Because there is insufficient data, you cannot make the following claim because predictions are based on inaccurate inputs: "The predictions for these nodes are not considered to reflect a Project effect and aquatic effects are not anticipated." Until more data for March and December becomes available to rerun the model, residual effects and mitigation options should be described to due to current exceedances of applicable benchmarks.	We respectfully disagree with the statement that WQ5 predictions are based on inaccurate inputs. We acknowledge that 1) March data were absent from the WQ5 baseline at the time model background terms were developed, and 2) there is an inherently higher degree of uncertainty in the March predictions. However, averaging the February and April monthly datasets to derive a March background term represents a reasonable approach to estimate background water quality for modelling purposes. The maximum predicted D-Al concentration for March during the Construction and Operation phases (i.e., the highest 95th percentile value of the Application variable climate case) is 0.075 mg/L. This concentration is equal to the WQ5 background term used for March (i.e., 0.075 mg/L). Therefore, there is effectively no Project effect on WQ5 D-Al concentrations during March time steps (and no residual effect to evaluate). Since the background terms were developed for the Application water quality model, baseline monitoring at WQ5 has continued and a March sample was collected in 2022 (0.024 mg/L). It can be inferred that model predictions for March time steps in the Construction and Operation phases would be below the BC long-term WQG if this sample value was used to represent the March background term for WQ5. Lastly, the months in which D-Al WQG exceedances occur at WQ5 vary from year to year within the baseline period (and will continue to vary in background waters once Project development commences). It is reasonable to assume aquatic biota in the Project area are acclimated to the naturally-elevated D-Al conditions, as well as interannual variability in the months in which background Al exceeds its WQGs. Should monitoring programs indicate the water quality model has underpredicted D-Al (or other parameter) concentrations as the Project develops, mitigations and management plans are in place to minimize the probability of adverse effects occurring in receiving environments, as described in Chapter 5 (Modelling, Mitigation, and Discharges) and Chapter 9 (Management Plans) of the Application.		LDN/UFN	Lorax					GM; Aug 12	Ready for Publishing
2065	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	In Figure 6.3-8 and 6.3-9, please include baseline D-Al data for Chedakuz Creek stations (WQ9, WQ13, Chedakuz Midway, and Chedakuz Outlet) like you did for Davidson Creek and Creek 661 stations. I am not sure why only modeled concentration predictions were presented for Chedakuz Creek while baseline concentrations were presented for the other two. Please make the figures consistent and update the interpretation of results if baseline concentrations shed more information.	Please refer to attachment "R2_LDN_UFN Comment ID 2065.pdf"		LDN/UFN	Lorax					GM; Aug 11	Ready for Publishing
2065	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		26-Aug-22	2	Follow up	Clarity	No	Can you clarify what both the "Baseline, mean" and "Base Case, 95th percentile" represent during pre-construction, contruction, and operations? What portions of the line series are based on real baseline data, and what are modelled? If modelled, what scenario was modelled? I would have expected "Baseline, mean" to have remained similar to pre-construction conditions assuming it represents "no mine" conditions. Also, assuming that "Base Case, 95th percentile" represents predicted conditions under mine operations, what does the pre-construction data represent and why is it different from "Baseline, mean"? Some clarity would be appreciated as there is still confusion surrounding these figures.	The "Baseline, mean" values represent the monthly averages of monitoring data from the baseline program (e.g., the January "Baseline, mean" value for a given station is calculated as the average of all samples collected at that station in January 2011, January 2012, January 2013, etc., through to 2020). As such, there are 12 "Baseline, mean" values per station, and these 12 monthly values are repeated in every year shown on the figures referenced (green line). The "Base Case, 95th percentile" values represent predicted concentrations generated in the water balance/water quality model. The values are referred to as "95th percentile" because the model runs 40 climate scenarios simultaneously for each monthly time step--the predictions presented in the figures referenced show the 95th percentile concentration of the 40 different predictions generated for each time step ("Base Case, 95th percentile"; blue line). The modeled ("Base Case") scenario in the figures referenced is the variable climate Base Case model with Base Case source terms. Please refer to Section 5.4, Surface Water Quality Model, and Appendix 5-D, Water Quality Model Technical Report, of the Application for further detail. The model is constructed to combine background and Project-related surface and groundwater loads, and predict the results of the combined load at specific nodes (i.e., water quality stations). Baseline surface and groundwater monitoring data are used to represent background loads. For most parameters, the resultant predicted background concentrations that have no mine loads or project development added (i.e., illustrated in the "Pre-Construction phase") are reasonably similar to those empirically measured in the baseline program (i.e., the "Baseline, mean" values). In other words, the model is good at replicating the background conditions for a given station. For specific parameters, however, most notably P (as described in Application Section 6.3.4.3) and Al (as the reviewer notes), the model is less well-calibrated to reproduce background concentrations. In general, risk associated with this outcome is mitigated as the model appears to conservatively over-predict Al concentrations by a small degree, rather than under-predict.		LDN/UFN	Lorax				16-Sep	GM; Sept 16	Ready for Publishing
2066	Chapter 3 Assessment of Alternatives for Mine Waste Multiple Accounts Analysis (MAA) Ledger: Technology precendent - processing	Technical	LDN/UFN (OKane_Blake Weinrauch)		Jul 27, 2022	1	New	comment	No	Candidate 1 is described as "Storage technology proven at project throughput" which is consistand with the scoring value of 5. Revision should be made to reduce scoring, or change the describtion of Candidate 1 to say "Storage technology proven ABOVE project throughput"	BW Gold acknowledges the comment. The Application will not be revised during the Application Review period. Importantly, reduction of the scoring for Candidate 1 from 6 to 5 is not expected to change the conclusion of the alternatives assessment. As identified in Table 10-1 of the Assessment of Alternatives for Mine Waste (Sensitivity Run 1), when only considering the technical account Candidate 1 was scored highest at 4.36 and the next highest score was 3.49 (Candidate 10).		LDN/UFN	ERM	KP	Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2067	Ch 4.	Technical	LDN/UFN (OKane_Jill Ashbury)		Jul 27, 2022	1	New	information requirement	No	It appears the focus is on the ecological value and habitat aspects of the land use in post closure. When considering the closure scenario for the TSF Beaches, has there been consideration taken in where the phreatic surface will lie? And how that will impact the ability to maintain saturated tailings?	Consideration of the phreatic surface has been taken into consideration as discussed in Section 4.7.4.1. In ecohydrological modelling, a 10 m buffer has been mapped from expected pond perimeters onto beach surfaces to represent areas that are likley to have subsurface water inputs, and thus, form wetter ecosystems.		LDN/UFN	ERM	IEG	Rolf		Ready for Submission	AT, Aug 09	Ready for Publishing
2068	Ch 4.	Technical	LDN/UFN (OKane_Jill Ashbury)		Jul 27, 2022	1	New	information requirement	No	It appears the focus is on the ecological value and habitat aspects of the land use in post closure. When considering the closure scenario for the TSF Beaches, has there been consideration taken in where the phreatic surface will lie? As well as the compentency of the TSF to maintain geotechnical and geochemical stability for the long term, post mining ?	Consideration of the phreatic surface has been taken into consideration as discussed in Section 4.7.4.1. In ecohydrological modelling, a 10 m buffer has been mapped from expected pond perimeters onto beach surfaces to represent areas that are likley to have subsurface water inputs, and thus, form wetter ecosystems. Long-term geotechnical and geochemical stability of the TSF is an integral aspect of design for the TSF as described in Appendix 3-K Tailing Storage Facility - Life of Mine Design Report, and Appendix 3-Z Supplemental Stability Assessment Report.		LDN/UFN	ERM	IEG	Rolf			AT, Aug 12	Ready for Publishing

2069	Ch.3 3.1.5	Technical	LDN/UFN (OKane_Muhammad Qureshi)		Jul 27, 2022	1	New	information requirement	No	Please specify area of WRD and stockpiles as well as Trucks payload	Per email from Mike O'Kane received on August 16th, LDN and UFN does not require a response to this comment and the comment is closed.		LDN/UFN	BWG			TD	Ready for Submission	TD; Aug 16	Ready for Publishing
2070	Ch.3 Fig 3.3-2	Technical	LDN/UFN (OKane_Muhammad Qureshi)		Jul 27, 2022	1	New	comment	No	Seems No NAG after year 15 in the LOM	Table 3.3-1 documents the Mine Production schedule and lists the production of NAG waste rock as continuing until Y+17. No further NAG waste rock is mined from the open pit in Y+18 and later as mining in the open pit has ended.		LDN/UFN	ERM	BWG	Rolf			AT, Aug 12	Ready for Publishing
2071	Ch.3 3.3.4.5	Technical	LDN/UFN (OKane_Muhammad Qureshi)		Jul 27, 2022	1	New	comment	No	No activities of Mine clsoure before year 19?	Section 3.3.4.4 describes the Operations Phase activities in the years preceding Y+19. Mine operations will be occurring and therefore mine closure will not be occurring during this period. Prior to Y+19, there may be limited opportunities for early progressive reclamation, and a program of nursery operations to propagate plants for revegetation will be underway.		LDN/UFN	ERM		Rolf			AT, Aug 12	Ready for Publishing
2072	Ch.3 3.4.1.2	Technical	LDN/UFN (OKane_Muhammad Qureshi)		Jul 27, 2022	1	New	Comment	No	Reduced levels are not provided in the open pit for haul profile	BW Gold acknowledges the comment.		LDN/UFN	MMTS	BWG	Marc S		Ready for Submission	TD, Aug 16	Ready for Publishing
2073	Ch.3 3.5.1.5	Technical	LDN/UFN (OKane_Muhammad Qureshi)		Jul 27, 2022	1	New	information requirement	No	Please clearly explain the stereographic analysis for Kinematic Stability analysis	The stereographic method was ultized for kinematic stability analyses for bedrock slopes. A detailed explanation of the stereographic anlaysis methods is presented in Section 5.5 of Appendix 3-B of the Application.		LDN/UFN	KP		Daniel	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
2074	Ch.3 Table 3.5 to 3.14	Technical	LDN/UFN (OKane_Muhammad Qureshi)		Jul 27, 2022	1	New	information requirement	No	what is the average side slopes , as it is showing 1.5:1 Channel, is it sufficient for the cover system deployment? Please provide supporting documentation.	The referenced section of the Application seems to be incorrect; however, we assumed the correct reference is to Table 3.5.3-14 (Design Criteria for Mine Area Creek Diversion Berm) in Chapter 3 of the Application. The minimum channel geometry for the section of the diversion channel in cut was a trapezoidal channel with a 1 m base width, 1.8 m depth, and 1.5H:1V side slopes. The channel design in this section was a "Type 1" channel, which is an unlined channel section (i.e. did not include a cover system) - see Drawings C1115 to C1117 and G0060 in Appendix D of Appendix 3-J (TSF Stage 1 Detailed Design Report) of the Application for details. The design criteria for this diversion channel will be reviewed for the Issued for Construction (IFC) design drawings. It is anticipated that the average side slopes of the Mine Area Creek Diversion Channel in cut will be adjusted to 2H:1V, and the channel will be lined with HDPE liner as part of the construction sequencing for the Water Management Pond. The updated design drawings will be included in the IFC design package.		LDN/UFN	KP		Michael	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
2075	Ch.5 ALL		LDN/UFN (OKane_Lisa Axelson)		Jul 27, 2022	1	new	information requirement	No	In chapter 5 and chapter 5 appendices as a whole, there appears to be several layers of built in conservatism (i.e.. PAG classification, estimated seepage via under-represented low perm layers, omission of sorption from source terms...) to the point where too much conservatism is being introduced as each layer of conservatism has a compounding effect. Has any work been completed in conducting sensitivity analyses for each layer of conservatism to gain an understanding of how each of these impacts models? Please provide documentation that clearly shows the multiple layers of conservatism have not resulted in non-representative models.	The reviewer is correct in that the water balance/water quality model integrates several components (e.g., source terms, water balance model, groundwater model, water quality model), each of which integrates its own layers of conservatism. Quantification of the uncertainty or conservatism built into these types of large water balance/water quality models is not possible using traditional methods, such as compounding or scaling uncertainty factors. Rather, the relative accuracy of model predictions rests on several lines of evidence, including: 1. Model inputs are based on empirical datasets, many of which extend for several years (e.g., baseline water quality data, groundwater level data, regional climatic data) and capture a wide range of environmental and climatic conditions. Empirical data are further supported by information available for analogue sites that may inform assumptions around data gaps or validate predictions. 2. Numerous model sensitivities have been conducted for the Blackwater model, including those presented in Chapter 5 of the Application, as well as those provided subsequent to the Application as part of the Round 1 and Round 2 Review process. The outcomes of these sensitivities provide confidence that the water balance/water quality model output is reasonable and can be rationalized based on the different inputs. 3. Predicted water quality for the water balance/water quality model "Pre-Construction" period (Years 2007 to 2022) can be used as a reasonable check as to whether the model components are working together as expected to produce water quality predictions (in the absence of Project development) that reasonably represents background conditions. 4. Professional judgement. The QPs responsible for all components of the water balance/water quality model have several years of experience generating such models and reviewing the supporting material and data therein.		LDN/UFN	Lorax	KP				GM; Aug 16	Ready for Publishing

2076	Ch 5. 5.5.4.2		LDN/UFN (KES_William Popov)		Oct 19, 2021	1	New		No	"""Results of the seepage pathway analysis are sensitive to specification of the "sink strength" input parameter, which defines the termination criterion for particle traces flowing through boundary cells. All modelled scenarios presented herein adopt a "stop at 50 percent strength" weak sink option to discontinue particle traces in boundary cells. Conceptually this means that the model terminates a particle trace in a cell if more than 50% of the water in the cell is removed. "" - This should be elaborated upon further. What are the physical implications of setting this parameter at 50%? Is this physically realistic? How does it compare to ""typical"" practice in this kind of modeling? Why specifically was it set at 50%?"	"The text has been modified to reflect how mod-PATH3DU tracks particle paths within a model grid cell. Mod-PATH3DU can determine if water (and simulated particles) terminate at a sink in a grid cell or flow through the cell. Mod-PATH3DU does not include a user defined option for removing particles at weak sinks. "		LDN/UFN	Lorax					GM; Aug 2	Ready for Publishing
2076	Ch 5. 5.5.4.2		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	information requirement	No	Thank you for your response, but the original question has not been adequately answered. Provide rationale for setting it at 50% and context for how this impacts the model relative to known conditions. Is this common practice?	Consideration and specification of the "sink strength" was a requirement when using the MODPATH particle tracking code. However, the particle tracking analysis presented in Appendix 5-F was completed using the newer mod-PATH3DU code, which does not include sink strength as an input. Sinks are explicitly represented in the equation calculating groundwater flow in mod-PATH3DU and water flowing to a cell is accurately tracked to or around the sink (Muffels et al., 2020). The original review comment applied to outdated text that was been removed from the report submitted in the Application as it is no longer relevant to the modelling code used in the particle tracking analysis. Reference: Muffels, C., Scantlebury, L., Wang, X., Tonkin, M., Neville, C., Ramadhan, M., and J.R. Craig, 2020. User's Guide for mod-PATH3DU: A groundwater path and travel-time simulator. S.S. Papadopulos & Associates, Inc. and University of Waterloo.		LDN/UFN	KP			AT/KP	Ready for Submission	GM; Aug 8	Ready for Publishing
2077	Ch 5. 5.5.5.1		LDN/UFN (KES_William Popov)		Oct 19, 2021	1	New		No	"Seepage flow rates and travel times are presented - This does not provide enough context regarding the modeled seepage. What is the quantity of seepage compared to the overall flows of the affected creeks? Could this lead to any negative environmental impacts? Does this meet all regulatory requirements regarding containment of mine waste?"	"The seepage estimates and travel times identified in this section (and Appendix 5-F) were used to inform the site wide water balance (section 5.3) and the water quality model (section 5.4). The site wide water models are then used to assess potential impacts to the receiving environments, if additional mitigaitons are needed, and what contingency measures or adaptive managment responses should be in place. Thus, the results of groundwater modelling identified in section 5.5 are not intended to be used to assess environmental impacts on their own. The design of the TSF follows best practice for management of mine waste and water. The TSF design follows the requirements under the BC Mines Act, including the Health, Safety and Reclamation Code (the Code) for mines, guidance from the Canadian Dam Association (CDA) Dam Safety Guidelines, and Engineers and Geoscientists of BC (EGBC) for site characterization."		LDN/UFN	KP						
2077	Ch 5. 5.5.5.1		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	information requirement	No	Water balance and water quality model have been updated. Okane has not had the opportunity to review the updates as of July 21,2022 and therefore cannot comment or resolve this comment. Carry forward to round 3 for review of updated reports.	This comment is acknowledged. We look forward to discussing this comment further in Round 3.		LDN/UFN	Lorax					GM; Aug 4	Ready for Publishing
2078	CH 5. 5.5.1		LDN/UFN (KES_Jessica Lowey)		Dec 20, 2021	1	new		No	The mine plans for each phase of mine life (i.e., construction, operation, closure, and post closure). Construction phase not included in this section as required by guidance document.	A general arrangement for the Construction phase is provided as Figure C.1 in Appendix C of the Life of Mine Water Balance Model Report in Appendix 5-B.		LDN/UFN	KP						
2078	CH 5. 5.5.1		LDN/UFN (OKane_Lisa Axelson)		Jul 22, 2022	2	Follow Up	information requirement	No	Please include referenced figure in this section, as required by guidance document.	BW Gold appreciates the comment however the application is not being updated. Please see the figures referenced in the previous response to this comment.		LDN/UFN	KP		Jordan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
2079		Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	1	New	QP Response Required	No	Provide complete documentation that demonstrates the EGBC issued the Quality Management Guides – Guides to the Standard for Documented Independent Review of High-Risk Professional Activities of Work has been considered and implemented as part of the work on the TSF. If not, why not? https://www.egbc.ca/getmedia/ef5d5b68-115d-4d5c-80b8-b47d278823f6/EGBC-Documented-Indep-Rev-of-HRPAW-V1-0.pdf.aspx	Please see attachment "R2_EMLI Geotech Comment IDs 2079.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
2079		Geotechnical	EMLI (S. Morse, A.McPherson)		Aug 25, 2022	2	New	QP Response Required	Yes	a)Does the Professional of Record consider the design, construction, operation and long- term closure of the Blackwater TSFs as "High-Risk Activities or Work" as defined in the EGBC Guide to the Standard for Documented Independent Review of High-Risk Professional Activities or Work (the "Guide")? Provide justification why or why not. [QP Response Required] b)When will the "documented risk assessment to satisfy the EGBC professional practise guidelines" be completed? [QP Response Required] c)The response states, "The independent internal review did not result in written documentation prepared in the manner described in the Guide." Describe the internal review completed (i.e. review process, specialists undertaking the review and their area(s) of expertise, when the review was completed, etc.) and provide relevant supporting documentation. [QP Response Required] d)The response states, "the final independent review should be based on substantially complete work, such as documentation issued for construction." Please note that the Guide also states, "A Professional Registrant involved in any HRPAW must comply with the requirement in section 7.3.6 of the Bylaws by	Please see attachment "R3_EMLI Geotech Comment IDs 288 2079.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	KP, Sep 16	Ready for Publishing
2079		Geotechnical	EMLI (S. Morse, A.McPherson)		Oct 12, 2022	3	Follow Up	Potential Permit Condition	Yes	a)As indicated under ID #288, if permitted, independent review of the Blackwater TSF is anticipated to be included as a Permit Condition. Closed b)As indicated under ID #288, if permitted, independent review of the Blackwater TSF is anticipated to be included as a Permit Condition. Closed c)EMLI technical reviewers note that no supporting documentation was provided. Closed d)Closed e)Closed	BW Gold acknowledges the potential permit condition.		EMLI	KP		Dan	AT/KP	Ready for BWG Review	GM; Nov 4	Ready for Publishing
2080	Appendix 3-O, Section 4.3.2	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	1	New	QP Response Required	No	Section 4.3.2 of Appendix 3-O states, "The channels were sized to convey the 1 in 10-year return, 24-hr flood with a minimum of 300 mm of freeboard and have sufficient capacity to pass the 1 in 200-year, 24-hr flood at bank full conditions." The HSRC Guidance Document states "Applications should provide…hydraulic capacity and confirmation that all ditches/channels can safely convey the design flood in accordance with CDA guidelines (minimum 1:200 years) without overtopping, side slope failure or significant erosion." Demonstrate that the design provided meets this requirement.	Please see attachment "R2_EMLI Geotech Comment ID 2080.pdf".		EMLI	KP		Michael	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
2081	Appendix 3-K, Section 7.3.7.3	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	1	New	Clarification	No	Section 7.3.7.3 of Appendix 3-K states, "The Phase 2 channels were sized to convey the 1 in 200-year return, 24-hr flood with a minimum of 300 mm of freeboard." Section 3.0 of Appendix D4 of Appendix 3-K provides design criteria for the Central Diversion System with a 'Design Flood' of '1:10 yr 24hr' for the 'North Collection Channel (Years 7 to Closure),' and the 'South Collection Channel (Years 7 to Closure).' Please clarify the design criteria for flood conveyance of the Central Diversion System Phase 2 channels.	The design criteria for the Central Diversion System Phase 2 channels was the 1 in 200-year, 24-hour design storm event with minimum freeboard of 0.3 m above the design flow level as stated in Section 7.3.7.3 of Appendix 3-K. Section 3.0 of Appendix D4 is incorrect.		EMLI	KP		Michael	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
2082	Appendix 3-K, Section 7.3.9	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	1	New	QP Response Required	No	Section 7.3.9 of Appendix 3-K states, "The Phase 2 Central Water Transfer Pond will be created by impounding water upstream of the West dam…" How has the impounding of water on the upstream side of the West Dam been considered in the analysis and design of the West Dam?	Please see attachment "R2_EMLI Geotech Comment ID 2082pdf".		EMLI	KP		Dan			AT, Aug12	Ready for Publishing

2083	Appendix 3-K, Section 5.5.1 and 7.3.9	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	1	New	Clarification	No	Section 5.5.1 of Appendix 3-K states, "It is understood that a fish offsetting project (design by others) is proposed that will divert flows from Lake 16 towards Lake 01538UEUT (Lake 15)." Section 7.3.9 of Appendix 3-K states, "It is anticipated that the final crest elevation West Dam will be above the crest elevation of the berm redirecting Lake 16 to Lake 15. As such, during high flow events, when the storage capacity of the pond and outlet pump are exceeded, excess water may overflow to Lake 16 through an overflow channel." Is the referenced 'berm redirecting Lake 16 to Lake 15' within the proposed permitted mine area?	The Lake 16 oulet berm and the Lake 15/16 connector overflow channel are both within the proposed permitted mine area, but outside of the area influeced by mine workings from a water quality perspective. These features are being permitted under the Water Sustainability Act.		EMLI	ERM	BWG	Valerie		Ready for Submission	RT; Aug. 7	Ready for Publishing
2084	Drawing C1410	Geotechnical	EMLI (S. Morse, A.McPherson)		Jul 22, 2022	1	New	Clarification	No	Drawing C1410, "Interim Environmental Control Dam, Plan and Profile," shows a 9 m wide bench on the downstream side of the Interim Environmental Control Dam, at elevation 1205 m. What is the purpose of this bench?	The bench provides a buttress that flattens the overall downstream slope angle from 2.5H:1V to approximately 3H:1V. It was also included to allow for access along the downstream side of the dam for monitoring and instrumentation installation purposes.		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 04	Ready for Publishing
2085	APPENDIX 9-O Section 8.3.3	AQFDMP	Northern Health (Paula Tait)		Jul 22, 2022	1	New		Yes	NH asks that the particulate monitoring program incorporate metals monitoring. Metals are not only a concern for country foods management, but also for inhalation by camp residents. NH has experience following up on a situation at a different mine where mine camp residents were found to have elevated blood lead levels associated with lead dust in the camp. We ask that this program be maintained for a period long enough (representative) to characterize true health risk to nearby receptors. This program should verify any uncertainties (baseline) and the conservativeness of modelled COPC predictions, especially since potential exceedances of chromium were identified at 2 receptor locations in the modelling report (as described in the next comment). A trigger action response plan should be included for COPCs monitored.	Metals in dustfall will be monitored as part of the CFMP. The HHRA did not identify any airborne metals as COPCs and therefore we do not see the need for ongoing monitoring. The chromium modelled as part of the air dispersion modelling was incorrectly compared to the hexavalent chromium criteria in Ontario rather than metallic chromium. The metallic chromium criteria of 0.5 ug/m3 over 24-hours was not exceeded in the modelling with a maximum predicted concentration of 8.99 x 10-4 ug/m3.		Northern Health	ERM		Andres		Ready for Submission	RT; Aug. 7	Ready for Publishing
2086	APPENDIX 9-O Page 52	AQFDMP	Northern Health (Paula Tait)		Jul 22, 2022	1	New		No	Although these guidelines should not be used to assess regulatory compliance, a review of the maximum concentrations indicates that all of the maximum predicted values are less than the presented guidelines, with the exception of 24-hour chromium at the Blackwater-Spruce Ranch and 24-hour and annual chromium at Tatelkuz Lake Resort. NH asks that this exceedance be investigated and health risks managed through the monitoring program in the AQFDMP.	The chromium modelled as part of the air dispersion modelling was incorrectly compared to the hexavalent chromium criteria in Ontario rather than metallic chromium. The metallic chromium criteria of 0.5 ug/m3 over 24-hours was not exceeded in the modelling with a maximum predicted concentration of 8.99 x 10-4 ug/m3.		Northern Health	ERM		Andres		Ready for Submission	RT; Aug. 7	Ready for Publishing
2087	APPENDIX 9-O Section 8.3 Monitoring	AQFDMP	Northern Health (Paula Tait)		Jul 22, 2022	1	New		Yes	NH asks that the monitoring program incorporate PAH monitoring which addresses the potential exceedance of benzo(a)pyrene described in the modelling report (as described in the next comment). A trigger action response plan should be included for COPCs monitored.	The assessment in the HHERA for the EA shows that hazard quotients and incremental lifetime cancer risks (HQs/ILCRs) were incredibly low for PAHs, so there is no need to include them in the monitoring program. All modelling done and emissions estimates were conservative in nature and therefore are likely over predictions of actual ambient concentrations. In addition, since the original EA there have been decreases in emissions due to Project changes, which would result in lower modelled predictions of PAHs.		Northern Health	ERM		Andres	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
2088	APPENDIX 9-O Page 55	AQFDMP	Northern Health (Paula Tait)		Jul 22, 2022	1	New		No	Although these guidelines should not be used to assess regulatory compliance, a review of the maximum concentrations indicates that the 24-hour benzo(a)pyrene guidelines is exceeded at all four locations and the lower annual guideline is exceeded at the Blackwater-Spruce Rance and the Tatelkuz Lake Resort. NH asks that this exceedance be investigated and health risks managed through the monitoring program in the AQFDMP.	The assessment in the HHERA for the EA shows that hazard quotients and incremental lifetime cancer risks (HQs/ILCRs) were incredibly low for PAHs, so there is no need to include them in the monitoring program. All modelling done and emissions estimates were conservative in nature and therefore are likely over predictions of actual ambient concentrations. In addition, since the original EA there have been decreases in emissions due to Project changes, which would result in lower modelled predictions of PAHs.		Northern Health	ERM		Andres	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
2089	Appendix 7-A AEMP Section 4.3	Effluent	BC ENV (Anna Akkerman)		Jul 12, 2022	1	New		No	Updated AEMP monitoring locations were provided in "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf" (ERM 2022). As the focus of this response was on water quality and aquatic resources, I would like to confirm the proposed changes to the hydrometric monitoring program. Please confirm current proposed hydrometric monitoring as part of the AEMP program on Creek 661 and its tributaries is as follows: - 661-01 (new station) - 661-02 (previously H1) - 661-09 (previously H11) My understanding is that these three stations are proposed as continuous monitoring locations during the open water season with instantaneous winter measurements to characterize low flows - is this correct?	Station 661-01 is no longer a hydrology/water temperature station and is now designated as a water quality/aquatic resources/fish sampling site only in the revised Aquatic Effects Monitoring Program (AEMP) Plan. The station for water quality/aquatic resources/fish sampling was added as an upstream reference site in response to comment ID #39 from ENV and resulted in the renumbering of sites in upper Creek 661. The map provided in "R1_BC ENV_Comment ID 39, 44, 45, 46, 47, 49, 51, 52, 53, 54, 56, 57, 61.pdf" mistakenly still showed hydrology and water temperature monitoring at 661-01; this has been corrected in an updated map provided in response to Round 2 comments (see the attachment "R2_ENV_Comment ID 58 and 64"). The revised AEMP Plan also indicates that there are two hydrology/water temperature sites on Creek 661: 661-02 (previously H1 and labeled as 661-01 in the March 2022 version of the AEMP Plan (Appendix 7-A)) and 661-09 (previously H11, labelled as 661-10 in the March 2022 version of the AEMP Plan (Appendix 7-A)). The only change to these stations was in the renumbering of both sites to accomodate additional sampling locations for other components in upper Creek 661 and to show their correct locations relative to the confluence between Creek 505649 and mainstem Creek 661. The reviewer is correct that the hydrology stations are proposed as continuous monitoring locations during the open water season, with instantaneous winter measurements to characterize low flows.		BC ENV	Entia	ERM	Lesley/Tonia		Ready for Submission	RT; Aug. 2	Ready for Publishing
2090	Appendix 7-A AEMP Section 4.3	Effluent	BC ENV (Anna Akkerman)		Jul 12, 2022	1	New		Yes	I appreciate the description of the proposed hydrometric monitoring methodology in the AEMP. I will likely recommend that the following language be included in section of the permit that addresses receiving environment hydrometric monitoring: "The hydrometric monitoring procedures, data analysis, quality and quantifying data grades must follow the standards as outlined by the Ministry's Resources Information Standards Committee (RISC) in the "Manual of British Columbia Hydrometric Standards Version 2.0 (2018)" or most recent edition. Hydrometric monitoring programs must be designed and implemented, and flow measurements conducted, with the intent of achieving acceptable Grade B data quality or better as defined by RISC (2018). To appropriately determine data quality, flow measurement must be conducted in accordance with the Manual of British Columbia Hydrometric Standards (RISC, 2018), or by suitable alternative procedures as authorized by the director. "	BW Gold acknowledges the comment and the AEMP Plan related to hydrometric monitoring will be revised if neccesary to meet the permit condition recommended by the reviewer.		BC ENV	Entia	ERM	Lesley/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2091	Appendix 9-0, Section 8.3.1	Effluent	BC ENV (Anna Akkerman)		Jul 12, 2022	1	New		Yes	I appreciate the description of the proposed climate monitoring plan. I will likely recommend a permit condition that will require continuous meteorological monitoring as proposed and will reference standards for instrumentation accuracy, operation and maintenance.	BW Gold acknowledges the comment.		BC ENV	ERM		Andres		Ready for Submission	RT; Aug. 7	Ready for Publishing
2092	Appendix 2-I Hydrology and Water Temperature Baseline Section 2.5	Effluent	BC ENV (Anna Akkerman)		Jul 12, 2022	1	New		No	The H4B high flow discussion suggests that the upper end of the rating curve may be erroneous, and therefore high flows and computed values, like mean annual discharge, may be inaccurate. Was this considered in subsequent work that may have relied upon the H4B data (i.e. water balance, etc..)? Comparison of concurrent streamflow in the same drainage can be a valuable tool in rating curve development, especially when extrapolating beyond the highest measured discharge. Was this done for H4B and H2 or was this comparison only completed afterward for this report? I note that the H2 rating curve may be a bit aggressively fit to more recent data while the H4B rating curve is quite conservatively fit with a relatively low exponent value. In addition to the proposed field observations, please consider if adjustments to the fit and especially the extrapolation of these curves may be sufficient to address the observed flow discrepancy.	Please see attachment "R2_ENV Effluent Comment ID 2092 2093 2094.pdf".		BC ENV	KP		Jaime	AT/KP	Ready for Submission	KP. Aug 16	Ready for Publishing
2093	Appendix 2-I Hydrology and Water Temperature Baseline Section 2.5	Effluent	BC ENV (Anna Akkerman)		Jul 12, 2022	1	New		No	Thank you for providing the unit runoff hydrograph comparisons in Figures 2.6-2.9. I find that this type of comparison can be very informative for interpreting and qa/qc'ing the hydrology records, however the scale of these figures makes it very difficult to compare anything other than differences in peak flows. Please provide zoomed in versions of these figures with the y-axis scaled to maximize visual presentation of the mid to low flow range. For example, for Figure 2.6 a maximum y-axis value of 30 or 40 l/s/km2 would likely be ideal.	Please see attachment "R2_ENV Effluent Comment ID 2092 2093 2094.pdf".		BC ENV	KP		Jaime	AT/KP	Ready for Submission	KP. Aug 16	Ready for Publishing

2094	Appendix 2-I Hydrology and Water Temperature Baseline Appendix A - H11	Effluent	BC ENV (Anna Akkerman)		Jul 12, 2022	1	New		No	a) The application proposes an entirely new rating curve for 2018-2020, including a higher intercept. Alternatively, the 2018 and 2019 low flows could be seen as an extension of prior low flows and that the old RC either curved too soon, or now curves at a higher stage than previously defined. The H11 2019 august low flows may support this alternative as flow during this period appears very low relative to other years at this location and when compared to other locations (i.e. 2019 low flows at H11 are anomalously low). Please consider this during the next review of the H11 rating curve, and consider the potential for more recent summer low flows to be underestimated at H11 if warranted elsewhere in application. b) Please confirm whether the July 2020 stage value is recorded properly. Using the stage reported on the table the point lies well below the rating curve; however application of the rating curve to the stage record results in the streamflow record passing directly through this point. This suggests that the point actually lies on the rating curve (or that the stage used to calculate the streamflow record would result in the point plotting on the curve). c) Why isn't the October 2020 measurement included on the rating curve figure?	Please see attachment "R2_ENV Effluent Comment ID 2092 2093 2094.pdf".		BC ENV	KP		Jaime	AT/KP	Ready for Submission	KP. Aug 16	Ready for Publishing
2095	R1_BC ENV Effluent Comment IDs 122 123.pdf	Effluent	BC ENV (E. Rainey)		Jul 22, 2022	1	New		No	The proposed runoff from the plant site to be managed during construction using the rapid infiltration basins will require an EMA authorization in the effluent permit for Major Works, as this is still considered a discharge to the environment, i.e., discharge to groundwater. The current EMA effluent authorization for Early Works (Permit 110602) was not intended to authorize this discharge continuing into construction. As such, please provide a summary of the proposed rapid infiltration basins for the plant site to be used during construction of the Major Works.	BW Gold will provide a response to comments related to the use of the RIBs beyond early works construction in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		BC ENV	KP	BWG	Stephanie	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
2095	R1_BC ENV Effluent Comment IDs 122 123.pdf	Effluent	BC ENV (E. Rainey)		Sep 27, 2022	2	Follow Up		Yes	Thank you for the response, no further comments. ENV is considering permit conditions associated with this discharge to ground, such as a Trigger Response Plan and installation and monitoring of groundwater wells downstream of the discharge.	Acknowledged.		BC ENV	KP	BWG	Stephanie	AT/KP	Ready for Submission	KP, Oct. 3	Ready for Publishing
2096	Appendix 7-A, Table 6.2-3	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	1	New		No	1. In the final AEMP please provide the sediment working guidelines so trigger limits are easily referenced. 2. In the table it be useful to refer to lowest applicable SWG so it's clear whether you are referring to lower or upper SWQ. I did see this discussed in the text above. 3. At the high trigger level, it would make sense for this to trigger annual sediment sampling rather than increasing frequency by 1 year (similar to lower triggers) given levels are of concern.	1. Appendix E of the Aquatic Effects Monitoring Program (AEMP) Plan will be revised to provide all benchmarks applicable to the Adaptive Management Framework (Section 6 of the AEMP Plan). Appendix E of the revised AEMP Plan will include guidelines, baseline concentrations/benchmarks, and predicted concentrations for all environmental media (including sediment) or biota. Baseline data collection is in progress, therefore, the next version of the AEMP Plan will include a revised draft of Appendix E. 2. The most conservative sediment quality guideline will be used for comparison to sediment quality concentrations (this is indicated in the text immediately preceding Table 6.2-3). A note for Table 6.2-3 indicating the most conservative sediment quality guideline will be included in the revised AEMP Plan. 3. As requested by the reviewer, Table 6.2-3, Table 6.2-4 and Table 6.2-5 will be revised to indicate that sediment quality, periphyton, and aquatic invertebrate sampling will be increased to an annual frequency rather than by one year at the high action level. BW Gold recognizes that management plans may need various updates as a result of permitting reviews		BC ENV	Entia	ERM	Lesley/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2097	CH5 - table 5.8-11 and table 5.8-9	Effluent	BC ENV (Andrew Foster)		Jul 22, 2022	1	New		No	1. ENV notes proposed permit limits for the camp site and downstream aggregate borrow area sediment control ponds exceed acute BC WQG. 2. ENV does not permit acutely toxic effluent. 3. A similar concern was noted in comment 587 and BW Gold's response to that comment did not adequately address that comment or concern. 4. Please provide an effects assessment of the camp site and downstream aggregate borrow area sediment control pond discharges.	BW Gold will provide a response to comments related to the SCPs in a follow-up response on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		BC ENV	Lorax					TD, Aug 16	Ready for Publishing
2097	CH5 - table 5.8-11 and table 5.8-9	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	2	Follow Up		No	Awaiting response from BW Gold	Please see attachment "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" and "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097_AppendixA.xlsx"		BC ENV (Andrew Foster)	Lorax		Georges		20-Sep	GM; Sept 21	Ready for Publishing
2097	CH5 - table 5.8-11 and table 5.8-9	Effluent	BC ENV (Andrew Foster)		Oct 24, 2022	3	Follow Up		Yes	1. There is still considerable uncertainty regarding potential acute toxicity in the proposed effluent limits for the Downstream Aggregate Borrow Area SCP. ENV will consider recommending interim discharge limits for zinc and cadmium that do not exceed acute BC WQG and adding a permit condition that requires additional toxicity testing to support potential future amendments to permit limits. 2. Overall, ENV supports Lorax's recommendations for reducing uncertainty through updating SCP source terms and discharge quality prediction; additional toxicity testing; and, a discharge plume delineation study. It is recommended that a request to amend permit limits at a later date only be submitted once the supporting data is available. 3. ENV is awaiting BW Gold's response to comment 587 and is considering recommendations from comment 587 regarding suggested permit conditions and proposed toxicity testing. 4. As discussed on September 26, ENV will be recommending that BW Gold submit a detailed toxicity testing workplan to ENV prior to testing as part of the permit requirements. This would help ensure toxicity testing meets ENV requirements and provides sufficient data to determine safe discharge limits as well as a safety margin.	Regarding items 1., 2., and 4., these comments are acknowledged. Regarding item 3., a response to Comment 587 was added to this tracking table on November 1, 2022.		BC ENV (Andrew Foster)	Lorax					GM; Nov 4	Ready for Publishing
2098		MWR	BC ENV (Breanne Hill)		Jul 14, 2022	1	New	Information Requirement	No	Please review the EIS that was submitted and ensure that it includes all of the information required under Section 19 of the MWR. If information is missing please include it in a memo to ENV.	Complete. The EIS and the supplemental Camp Sewage Treatment and Disposal Operations Manual submitted August 16, 2022 includes all of the information required under Section 19 of the MWR. As noted in the IRT MWR, Section 19(2)(b) and (c) are not applicable.		BC ENV	BWG			TD	Ready for Submission	TD, Aug 16	Ready for Publishing
2098		MWR	BC ENV (Breanne Hill)		Aug 25, 2022	2	Follow Up	Information Requirement	No	Section 19(a) of the MWR requires that the EIS include information on the potential cumulative impacts of the discharge on the receiving environment. Please include this information in a memo and submit it to ENV.	Please refer to attachment "R3_ENV Comment ID 2098.pdf"		BC ENV (Breanne Hill)	BWG		Travis		27-Sep	TD, Sept 27	Ready for Publishing
2098		MWR	BC ENV (Breanne Hill)		Oct 04, 2022	3	Follow Up	Information Requirement	No	The ENV review of the response to ENV comment 2098 (cumulative effects) is complete. The comments below are in reference to Section 2.1.1 for the Operation Camp Sewage. Additional comments on the Plant site sewage may be received at a later date. The information in the response refers to a an EIS that was prepared in support of a project permitting process in 2014 and references the use of Rapid Infiltration Basins (RIB) as a way to discharge the municipal effluent generated on site. However, the current MWR application indicates that the existing disposal field will be used. Please confirm if the location of the existing disposal field and the proposed RIB location. If they are not	We apologize for the confusion caused by our previous response as we referred to an incorrect section of an EIS report in our previous response. The current MWR application indicating use of the existing disposal field (via a 3.5 km pipeline from the camp to the disposal field) is the correct version. The RIB area was proposed as a potential future effluent disposal location, which is not the subject of the current MWR application. Both the existing disposal field and the RIB area are located within the Project mine site in reasonably close proximity to each other and both are located in the same drainage (unnamed creek, which is Creek 146920, a		BC ENV (Breanne Hill)	Entia				18-Nov	GM; Nov 16	Ready for Publishing
2098		MWR	BC ENV (Breanne Hill)		Nov 28, 2022	4	Follow Up		No	EIS that includes cumulative impacts – Information to be submitted on December 8, 2022	This comment was closed based on ENV evaluation of the Round 3 response above, as per email from MMO on December 5, 2022.		BC ENV (Breanne Hill)	Entia				Ready for BWG Review		
2099	Table 5.2-5	Air	BC ENV (Breanne Hill)		Jul 14, 2022	1	New	Information Requirement	No	When particulate matter data is collect it is generally collect at or near a meteorological station. Please explain the rationale for not having the meteorolgocial and particulate matter sampling units in the same location and how the meteorological data will be used when iterpreting the particulate matter data..	The Blackwater High meteorological station is located approximately 2 km from the air quality station at the workers camp. The area has limited topographic relief therefore it is anticipated that meteorological conditions at the met station will be representative of the area that includes the air quality station and therefore can be used to interpret the sources of particulate matter measured by the Partisol.		BC ENV	ERM		Andres	RT	Ready for Submission	RT; Aug. 7	Ready for Publishing

2099	Table 5.2-5	Air	BC ENV (Breanne Hill)		Oct 07, 2022	2	Follow Up	Information Requirement	No	Can you please ask BWG to explain why the dust collectors for the fusion furnace diesel exhaust and the Lime Silo dust collector are predicted to be 30.8 mg/m3 and 55.0 mg/m3 when the other dust collectors all have emissions around 13.8 mg/m3	The efficiency of lime silo scrubber is related to parameters - e.g. particle size distribution of the material, inlet dust loading. Once the scrubber is set up during commissioning, the scrubber will have an efficiency of up to 80% at optimal slaking operating condition. 55.0 mg/m3 was selected as a conservative estimate, we expect emissions to be lower. To provide an update on what was presented for air emissions predictions, an update has been made to the design of the process plant since that there will be no propane fusion furnace, it will be an electric induction furnace, essentially no particulate emissions. Additionally, as an update: **Equipment Originally Now** Smelting furnace Propane Electric induction Strip solution heat Propane Electric Carbon Regen. Kiln Propane Electric Building heaters Diesel/Propane Electric		BC ENV	BWG			TD		TD, Oct 20	Ready for Publishing
2100		Air	BC ENV (Breanne Hill)		Jul 22, 2022	1	New	information Requirement	No	When particulate matter data is collect it is generally collect at or near a meteorological station. Please explain the rationale for not having the meteorolgocial and particulate matter sampling units in the same location and how the meteorological data will be used when iterpreting the particulate matter data..	The Blackwater High meteorological station is located approximately 2 km from the air quality station at the workers camp. The area has limited topographic relief therefore it is anticipated that meteorological conditions at the met station will be representative of the area that includes the air quality station and therefore can be used to interpret the sources of particulate matter measured by the Partisol.		BC ENV	ERM		Andres	RT	Ready for Submission	RT; Aug. 14	Ready for Publishing
2101	Water Sustainability Act - Authorizations	New Groundwater Wells Application	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	In the Ancillary Authorizations folder – "WSA New GW Wells Application", there is only a single large (1677 page document). This contains the water licence application, appendices etc.... Most of this information was not provided through the FCBC application. I tried to copy it over to my folder but the SharePoint site did not permit that. Can you please advise how I can obtain this file/information for our internal files?	Please see 'R2_FLNRORD_Groundwater Comment 2101.pdf'		BC FLNRORD	ERM			AT	Added report from		Ready for Publishing
2102	Water Sustainability Act - Authorizations	Water Management Structures	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	In the WSA application for Water Management Structures, the proponent identified that "there is some uncertainty related to the regulatory agency responsible for oversight of the water management structure designs associated with the Project....it is KP's understanding that regulatory oversight of the structure designs and operation will be managed by EMLI, and associated water licenses will be approved and regulated by FLNRORD.". I do remember the meeting with EMLI, the proponent, their consultants and yourself where we discussed this. A the time, new information was being presented and there was some uncertainty. I am bringing this up now as a flag that EMLI, I and perhaps you should meet to clarify roles and responsibilities. I am back from holidays on August 15th.	BW Gold welcomes the opportuntiy to meet and clarify roles and responsibilities, as suggested.		BC FLNRORD	KP		Stephanie	AT/KP	Ready for Submission	AT, Aug 11	Ready for Publishing
2103	Water Sustainability Act - Authorizations	General	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	Overall, I found their applications to be quite good. The outlier was the application to withdraw water from Tatelkuz Lake. That one definitely missed a lot of pertinent information. For a water licence, a decision maker must consider the impact of water withdrawals on environmental flow needs and consider the Provincial Environmental Mitigation Policy. In this case, that would include Tatelkuz Lake and Chedakuz Creek as potentially impacted water sources. There was a lot of background information and description of works but the most critical parts were missing. Please see those comments below:	Thanks you for the comment. Responses to comments 2104 to 2108 provides much of the additional information requested.		BC FLNRORD	KP		Stephanie	AT/KP	Ready for Submission	AT, Aug 08	Ready for Publishing
2104	Water Sustainability Act - Authorizations FWSS Report 1 - Appendix D	Ancillary Authorizations - FWSS Application	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	FWSS Report 1 – Appendix D – Condition 28: This Environmental Assessment Condition is for the requirement to develop a "Chedakuz Creek and Tatelkuz Lake Surface Water Quality Monitoring Plan". Comment: Please provide this plan.	The Chedakuz Creek and Tatelkuz Lake Surface Water Quality Monitoring Plan (in accordance with EAC Condition 28) is provided as Attachment B in the Aquatic Effects Monitoring Program Plan (Appendix 7-A).		BC FLNRORD	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2105	Water Sustainability Act - Authorizations FWSS Report 1 - Table 1.2, Section 3.16	Ancillary Authorizations - FWSS Application	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	FWSS Report 1 -Table 1.2, Section 3.16: This condition states "Develop a follow-up program as it pertains to fish habitat in Tatelkuz Lake and Chedakuz Creek, including fish habitat quantity and quality surveys. Monitor the Tatelkuz Lake littoral zone, monitor water flows in Chedakuz Creek between Tatelkuz Lake and the confluence with Davidson Creek." Comment: The FWSS WSA water licence application does not include a monitoring plan. This plan should also include measures or thresholds for the protection of instream values.	The requested information is presented in the CEAA Condition 3.16 Follow-up Plan which has been attached (see "R2_FLNRORD_Comment ID 2105 and 2106.pdf"). This plan includes an adaptive management trigger-response framework that will be applied to instream values. This latest version of the plan currently is undergoing review from other regulators and Indigenous Nations.		BC FLNRORD	Palmer	BWG			Ready for Submission	TD; Aug. 12	Ready for Publishing
2106	Water Sustainability Act - Authorizations FWSS Report 1 & 2	Ancillary Authorizations - FWSS Application	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	FWSS Report 1 and 2: Neither of these reports identify potential impacts of pumping water from Tatelkuz Lake and plans for avoidance/mitigation of impact. This relates to my previous comment about a monitoring plan and thresholds. This may have been discussed extensively during the environmental assessment process but nothing appears to have been provided to support this water licence application. Can you please provide this information?	The requested information is presented in the CEAA Condition 3.16 Follow-up Plan which has been attached (see "R2_FLNRORD_Comment ID 2105 and 2106.pdf"). This plan includes an adaptive management trigger-response framework that will be applied to instream values. This latest version of the plan currently is undergoing review from other regulators and Indigenous Nations.		BC FLNRORD	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2107	Water Sustainability Act - Authorizations FWSS Report 1 and water license application	Ancillary Authorizations - FWSS Application	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	FWSS Report 1 and water licence application (tracking number 100350124): The requested rate of withdrawal, from the water licence application is 0.67 m3/s. It is unclear whether this is an average rate of withdrawal, maximum rate and/or if withdrawal rate will be variable (e.g. seasonally variable). Will this pumping rate vary with IFN's of Davidson Creek (Table 2.2. of FWSS Report 1)? Please clarify.	The FWSS will need to withdraw a maximum of 0.67 m3/s to meet the seasonal Instream Flow Needs (IFN) in Davidson Creek. The intake screen and pumps were sized to provide the maximum IFN value of 0.56 m3/s required from May 11 - Jun 30, plus a 20% contingency. The withdrawl rate is expected to be seasonally variable to meet the IFNs. The FWSS will be required in Year 6 of mine operations, and from Years 6 through 17 is anticipated to contribute up to 10% of total IFNs under average conditions, with withdrawl primarily required in non-freshet months. During later years, as mining throughput increases and the project footprint cuts off additional upstream catchment reporting to Davidson Creek, the FWSS is estimated to provide 40% of total annual IFN flows, and is likely to be required during all months.		BC FLNRORD	KP		Stephanie	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
2108	Water Sustainability Act - Authorizations FWSS Report 1 & 2	Ancillary Authorizations - FWSS Application	BC FLNRORD (Phillip K)		Jul 22, 2022	1	New		No	FWSS Reports 1 and 2: A water licence authorizes water use and associated works. For this application, this includes works in or about a stream (pipeline stream crossings, buried pipeline (foreshore of Tatelkuz Lake), submerged intake etc....). Please provide a CEMP for any works that apply. I do not believe that anything was supplied with the water licence application.	A standalone (CEMP) has been developed by Knight Piesold to include detail related to the construction of the FWSS in and around water (including pipeline stream crossings, buried pipeline, and the Tatelkuz Lake intake). The CEMP includes specific mitigations and management measures and protocols that will be employed to reduce impacts of the environment during construction of the FWSS. Please refer to attached memo 'R2_FLNRORD_Comment ID 2108_FWSS_CEMP'		BC FLNRORD	KP	Palmer/BWG	Stephanie		Ready for Submission	TD; Aug. 12	Ready for Publishing

2109	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		29-Aug-22	2	Follow up	Information request	No	Thank you for your response. BC MOE Guidelines state that DIN (ammonia, nitrate, nitrate) and SRP (i.e. orthophosphate) are the appropriate and bioavailable fractions of TN and TP to monitor in streams because these are the fractions that are bioavailable. It appears from the proponent's response that both DIN (which is the sum of ammonium, nitrate, nitrite) as well as SRP (i.e. orthophosphate) were measured during baseline studies. Therefore, DIN:SRP ratios should be presented instead of what is currently used in Table 6.3-7. If TN in this table actually represents only DIN as the response indicated, then that is fine (although the reviewer disagrees with the assumption that DIN=TN in a greenfield site, as TN also contains particulate N and organic N, both of which occur naturally). But the reviewer cannot accept the justification for phosphorus. Orthophosphate should be the only form of phosphorus in both baseline and future predicted concentrations. While the reviewer agrees that we can tease out any predicted change in P from baseline due to orthophosphate contributions, we cannot infer the true DIN:SRP ratios. Both the absolute concentrations and the ratios of DIN:SRP are relevant when interpreting nutrient impacts, as there are recommended guidelines for streams for DIN if N limiting, and SRP if P limiting (see comment 2111). Furthermore, the ratios presented in Table 6.3-7 should be based on mass, not moles. The reviewer requests that Table 6.3-7 be revised to represent mass ratios of DIN (ammonium+nitrate+nitrite) to SRP (orthophosphate). Source: B.C. Ministry of Environment and Climate Change Strategy 2021. Nutrients and Algae Water Quality Guidelines (Reformatted from: British Columbia Ministry of Environments, 1985. Water quality criteria for nutrients and algae). Water Quality Guideline Series, WQG-16. Prov. B.C., Victoria B.C. https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-guidelines/approved-wqgs/bc_env_nutrients_and_algae_waterqualityguidelines_technical.pdf	BW Gold will not be making further edits to the Application at this time. However, the reviewer's recommendation to derive phosphorous predictions based on orthophosphate (e.g., SRP) concentrations is noted and may be incorporated in future model updates. The water balance/ water quality model does not provide predictions for orthophosphate. Therefore, a revision of Table 6.3-7 is not provided. The reason for this is partly due to discrepancies in the baseline dataset encountered for this particular form that would result in background terms that were potentially non-representative. The rationale for use of T-P in the model at the time of model development was also supported by the CCME guidance framework for freshwater systems, which is based on T-P. It is noteworthy that the water quality model incorporates conservative assumptions in all steps of the derivation process (e.g., derivation of source terms, performance criteria), and potential uncertainty associated with phosphorous predictions will be mitigated through ongoing monitoring and adaptive management. The rationale behind the use of total forms to establish the ratios between nitrogen and phosphorous is that these forms most likely represent an overestimation of what's biologically available in streams. This fact is also acknowledged in the nutrients water quality guideline (BC ENV 2021). Total forms, as the reviewer correctly stated, include all chemical forms present in the water column, including organically-bonded forms (i.e., particulate organic nitrogen), which may not be readily available for uptake by aquatic biota (although particulate forms of both N and P may readily degrade within the water column, yielding bioavailable forms). This further supports the likely overestimation of nutrient availability when using total forms (e.g., the rationale behind the assumption of DIN = TN) to estimate potential effects in receiving environments. BC ENV (2021) recognizes the complexity of establishing phosphorous limits in flowing waters. Other factors such as velocity, and light are listed as determinants of potential algal accumulation independent of phosphorus concentrations and therefore, no phosphorous thresholds are proposed for streams in that document. Furthermore, the use of a criterion such as SRP is deemed "impractical" in the guideline document, with algal biomass suggested as a better estimation of eutrophication potential in streams. Based on this, the aquatic environment monitoring program (AEMP) proposed for the Project includes the evaluation of Chlorophyll *a*, as a surrogate for algal biomass estimations.		LDN/UFN	Lorax				Sept. 23	GM; Sept 23	Ready for Publishing
2109	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		06-Oct-22	3	Follow up	Information request	No	Thank you for your response. Is the reviewer correct in understanding that the current model is having trouble accurately predicting orthophosphate at this time? The proponent mentioned future model updates - can we expect this anytime in the near future?	We would clarify that the model does not have trouble accurately predicting orthophosphate. Rather, the baseline dataset for orthophosphate (notably for the 2011-2014 monitoring period) that would be used to develop background terms is suspected of carrying a higher degree of uncertainty compared to total phosphorus and was therefore not used. This uncertainty is attributed to a suite of suspect datapoints that are inconsistent with: 1) other orthophosphate concentrations collected in the same flow period at the same station, and/or 2) same-sample total dissolved phosphorous concentrations, which should always be equal to or higher than orthophosphate (for example, in some samples orthophosphate is substantially higher than total dissolved phosphorus). With respect to future model updates, the model is anticipated to be routinely updated every five years as part of permitting requirements. A near-term update (~Operations Year 2) to the model is also anticipated, pending ongoing Review comment/responses in this tracking table (e.g., Comment #437).		LDN/UFN	Lorax					GM; Oct 31	Ready for Publishing
2109	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Comment	Yes	Table 6.3-7: Total N and Total P are way too coarse to determine what is limiting without understanding what percentage of Total N is Dissolved Inorganic Nitrogen (DIN) and what percentage of Total P is Solube Reactive Phosphorus (SRP). It is highly recommended that the water samples be retested for DIN and SRP and the water model be re-run with those constituents.	Thank you for your comment. Surface water quality samples collected during the baseline period are not available for re-analysis. With respect to nutrients, baseline water samples were analyzed for ammonia, nitrite, nitrate, orthophosphate (2011 onwards), total phosphorus (colourimetric method; 2017 onwards), and total dissolved phosphorus (2011-2013), consistent with the Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators (BC ENV, 2016). Because the Blackwater Project is a greenfield site, the dissolved inorganic nitrogen concentration is assumed to equal the total nitrogen concentration, which is calculated as the sum of ammonia, nitrate, and nitrite concentrations. The Soluble Reactive Phosphorus concentration in a given sample can be estimated from the measured orthophosphate concentration. On average, orthophosphate concentrations were 41% of total phosphorus (colourimetric) baseline concentrations for Davidson Creek stations including WQ28, WQ27, WQ26, and WQ27 (2017 to 2020) In regards to predicted water quality during Project operations, the primary forms of mine-related nutrients anticipated are ammonia (from cyanide destruction and blasting residues), nitrate (from blasting residues), nitrite (as an intermediate nitrogen-product of the above sources), and orthophosphate (from mineral weathering). Re-running the model with the proposed updates is not considered necessary at this time. This is based on the fact the analysis presented in Section 6.3.4.3 and Table 6.3-7 effectively considers the summed concentrations of predicted ammonia, nitrite and nitrate. With respect to phosphorous, predicted concentrations reflect, 1) background source terms calculated using baseline total phosphorous concentrations, and 2) additional loading contributions from mine contact areas as orthophosphate. In this sense, the predicted relative change in P from baseline conditions (i.e., background terms) during the Project Construction and Operation phases can be considered to entirely reflect orthophosphate contributions.		LDN/UFN	Lorax					GM; Aug 12	Ready for Publishing
2110	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	Table 6.3-7: N limitation puts the system at high risk of harmful algal blooms (toxic blue-green algae). What are some anticipated effects from the system becoming N limiting during the winter months (during construction phase)? Please address this comment in a memo.	Please see attachment "R2_LDN.UFN Comment ID 2110 2111 2112.pdf"		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing
2111	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	Table 6.3-7: You indicate no Provincial or Federal guidelines have been developed for N species for protecting aquatic life against excessive algal growth and water quality degradation, but please conduct literature research to determine whether current predicted increases in N is linked to eutrophication. Please address this comment in a memo.	Please see attachment "R2_LDN.UFN Comment ID 2110 2111 2112.pdf"		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing

2111	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		29-Aug-22	2	Follow up	Information requirement	No	Thank you for your response. With respect to the first bullet point, which state that N and P may not be good indicators of algal growth in streams due to the influence of other factors, the reviewer sees that chlorophyll a is a paramter measured in the AEMP. Is there baseline data available for this parameter? How does it compare to the maximum of 100 mg/m2 recommended by BC MOE (1981)? With respect to the second bullet point, which highlight the importance of N:P ratios, rather than their individual concentrations, in determining risk of eutrophication, the reviewer partially agrees. Both N:P ratios and their individual concentrations are relevant when assessing potential for eutrophication. According to BC MOE Nutrients and Algae Water Quality Guidelines (2021), factors contributing to high risk of excess algal growth in streams are (page 21): 3 ug/L SRP; if P limited 25 ug/L DIN; if N limited Predicted DIN far exceeds 25 ug/L, and although we don't know what the absolute SRP concentrations are, the proponent stated that we can assume all project-related increases are in fact SRP (orthophosphate). In lower Davidson creek stations, project-related increases of P range from 8-14 ug/L (Table 6.3-8). This is concerning and warrants additional mitigation measures to reduce both N and P increases. With respect to the third bullet point, which suggests that the project area creeks are P limited and thus N has a minor role in algal growth, the reviewer agrees that the Project area will likely be P limited due to the amount of N that will be introduced by the project. Therefore, it is important to to see the data for SRP in streams as well as DIN:SRP ratios to prove P limitation. The proponent recognizes there are anticipated orthophosphate increases due to mine contact. Therefore, mitigation measures should be in place to address P inputs, if not P and N. In a case study at a mine at Peachland Creek, heavy algal growth was found in response to nitrogenous explosive use and P releases from land disturbances (BC Research 1979; BC MOE 2021).	Baseline Report). With the exception of Chedakuz Creek (Station WQ13), Chl *a* values remained well below the 100 mg/m2 (or 10 ug/cm2) guideline. For station WQ13, concentrations approaching guideline values were reported for the collection campaign performed in 2011-2012 (2 to 10 ug/cm^2). However, these elevated values were not reflected in the Chl *a* values reported for samples collected in 2017 from station WQ13 (all reported values fall well below the water quality guideline [< 1.2 ug/cm^2]). This highlights two major points 1) WQ13 is located immediately downstream of agricultural fields, which may explain the differences in Chl *a* values measured between years (e.g., seasonal application of fertilizers) and 2) Data collected in 2011-2012 have shown some uncertainties and discrepancies due to the performed analysis; as such, the reported Chl *a* values may be considered subject to higher uncertainty. BW respectfully disagrees that additional mitigations, beyond those already committed to in the Application and subsequent Review comment responses, are warranted at this time to address potential effects from nutrients. This conclusion is drawn from 1) a lack of a quantifiable relationship between predicted N and P concentrations and ecological effects, and 2) uncertainty in concentrations that will be realized in the receiving environment. With respect to 1), BC ENV (2021) recognizes the difficulty and uncertainty of deriving P thresholds applicable to flowing waters. The value of 3 ug/L SRP for P-limited conditions is proposed in ENV (2021) as a tool for the assessment of P concentrations with no intended (or clear) link to relevant ecological effects. Furthermore, the BC ENV (2021) document states that specifically for streams "without the appropriate accompanying physical conditions, nuisance algal growth might not occur even at relatively high phosphorus concentrations". With respect to 2), assumptions that underly P and N predictions are presented in Application Section 6.3.4.3. An additional source of uncertainty in these assumptions can be further confounded by biological processes that may occur in Project water management (e.g., vegetative growth, microbial N cycling), as well as P and N attenuation along subsurface flow paths that ultimately decrease loading to receiving creeks. These processes are not included in the water quality model. It is further noted that N loading from blasting can be strongly influenced by the degree of adherence to good blasting practices and nitrogen management. To address this, BW Gold has committed to the development and implementation of a Nitrogen Management Plan prior to the onset of Operations. Please refer to the response provided to Round 3 Comment 2112 for a summary of existing mitigations and management plans proposed for the Project. Further to this, an extensive AEMP monitoring program (Application Appendix 7-A) is in place to inform adaptive management		LDN/UFN	Lorax				Sept. 23	GM; Sept 23	Ready for Publishing
2111	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		06-Oct-22	3	Follow up	Information requirement	No	The reviewer appreciates that the current relationship between predicted N and P concentrations to ecological effects is not clear and has inherent uncertainty. However, these are still parameters of concern and should be managed as if they have the potential to be a problem down the road. I acknowledge that the Nitrogen Management Plan will be an important piece to this and we look forward to reviewing it. When can we expect this plan? Further, in Table 6.2-4 of Appendix 7-A, there are no concrete details on how increases of chlorophyll a will be managed. Does BWG have feasible actions to mitigate increases should a trigger occur?	Lorax to respond to first part of question. As described in Table 6.2-4 of the Aquatic Effects Monitoring Program Plan (Appendix 7-A), the first management response in each of the trigger levels (low, medium, high), is to identify the cause of changes in chlorophyll a concentrations so that targeted mitigation measures can be implemented. Tthere are many potential sources or causes of changes in chlorophyll *a* concentrations, therefore, 'concrete details' on management responses cannot be provided until it is understood what is causing any observed change. Once the cause is identified, adjustments to existing mitigation or implementation of new mitigation can be specifically targeted to address the root cause of the change.		LDN/UFN	Lorax				31-Oct	GM; Oct 31	Ready for Publishing
2111	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		17-Nov-22	4	Follow up	Information requirement	No	Just a note that Lorax has not responded to when the Nitrogen Management Plan will be available. The reviewer agrees that exact management responses are hard to predict, but the proponent needs to demonstrate a level of knowledge required to execute effective management actions. The reviewer is not looking for solutions to every single possible problem, but rather that the proponent understands where the major vulnerabilities are, and has the "toolbox" to fix the most common issues. This falls under a bigger umbrella issue in this ITT, where trigger response plans do not demonstrate that the proponent has thought through what potential failures may be, and what might be required to address failures. For example, details that could be added to the trigger response plan are: -where are the most common sources of the POC? -what are some ways to manage unexpected exceedances (e.g. increase capacity of WTPs, better manage source materials)? -do you have the ability to execute these management responses (e.g. can you even increase capacity of WTPs)? The reviewer notes that proponent has exemplified technical knowledge with respect to the mitigation of POCs in Chapter 5, but needs to go one step further to answer the question "if these mitigation measures are not enough, what then?"	a) BW Gold is committed to developing and implementing Nitrogen Management Plan prior to commencement of blasting in the open pit. The plan will be provided for review prior to commencing blasting in the open pit. b) The groundwork for a conceptual Trigger Response Plan (TRP) has been laid in the Mine Site Water and Discharge Monitoring and Management Plan (Appendix 9-E of the Application) in the non-conformities/corrective actions and adaptive management sections. The final TRP will be developed based on criteria specified in the EMA permit (e.g., discharge limits) and will provide specific actions to be taken if a quantitative trigger is exceeded. This was discussed at the November 9 issues resolution meetings. ENV participated in the meeting and added that development of a TRP is a likely permit condition for construction and operations. BW Gold understands that the Nations have expressed that a subsequent meeting with ENV is required on this topic and has communicated this to ENV to arrange a meeting to resolve any residual issues.		LDN/UFN	Lorax					RT; Nov 23	Ready for Publishing
2112	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	Pg 6-47: cumulative effects of N input should include potential interactions with downstream nutrient input from agricultural land use, and future conversions of land to agricultural use. If there are significant P inputs from downstream sources, it could create result in eutrophication downstream. Please address this comment in a memo.	Please see attachment "R2_LDN.UFN Comment ID 2110 2111 2112.pdf"		LDN/UFN	Lorax					GM; Aug 15	Ready for Publishing
2112	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.3	General	LDN/UFN (Brenley Yuan)		29-Aug-22	2	Follow up	Information requirement	No	Thank you for the response. Given the potential P inputs from agriculture and logging downstream, are there current mitigations in place to manage N and P runoff/leaching? As requested in comment 2111, it appears that additional measures are warranted to address N and P inputs from the mine.	The Project has incorporated several design elements for implementing the control of both the volume of contaminated water and the contaminant loadings, including N and P, that are generated during operations to reduce potential impacts to the receiving environment. With respect to runoff and leaching control, such mitigations include: -Surface water diversions -Treatment -Water recycling (i.e., water from TSF [including small inputs from the sewage treatment plant] will be used to provide process water for mill operations), -Seepage control and collection Please refer to Application Section 5.6 (introductory text) and Section 5.6.1 for further detail on Project mitigations related to this topic. These mitigations are complemented by a suite of management plans that document proposed runoff and leaching controls (Application Chapter 9, Appendix 9-A (Surface Erosion Prevention and Sediment Control Plan), Appendix 9-B (Soil Management Plan), Appendix 9-D (MLARD Management Plan), Appendix 9-E (Mine Water and Discharge Management and Monitoring Plan)). In addition to the above plans, BW Gold has committed to developing a Nitrogen Management Plan prior to open pit blasting. No additional mitigations for P or N discharges from the Project are proposed at this time, other than those commitments identified in the Application and as part of the Application Review process. Please refer to the response to Round 3 Comment 2111 for further detail.		LDN/UFN	Lorax				Sept. 23	GM; Sept 23	Ready for Publishing

2113	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Comment	No	Page 6-51: I am not convinced that these offsetting ratios (particularly the riparian offsetting ratios) will result in the full offset of residual effects given the high uncertainty of restoration activities. This comment has also been noted in other documents related to fisheries offsets.	The revised offsetting ratio of approximately 0.71:1 for the gain:loss of riparian habitat is based on area-for-area accounting, which, unlike habitat units for instream habitat, does not incorporate the quality of the habitat (Palmer 2022, Blackwater Application for Fisheries Act Authorization). A less than 1:1 ratio for riparian habitat area (m2) arises due to small tributary streams (i.e., Davidson Creek, Creek 661) having disproportionately large riparian areas, the creation of off-channel ponds does not provide high ratios of riparian area, and conservative application on riparian habitat gains. The majority of habitat losses occur in the upper Davidson Creek Watershed, alongside small headwater streams supporting low densities of Rainbow Trout. The contribution of riparian habitat in this area is relatively low. In comparison, the contributions of riparian habitat to fish habitat productivity are anticipated to be much higher in association with the proposed offsetting measures in the ranchland stream areas, which has higher potential for fisheries productivity (higher fish species diversity and density). Based on these factors, the proposed instream habitat area offsetting ratio and riparian area ratio are appropriate in counterbalance the effects of habitat loss. The offsetting plan, including habitat accounting, is currently under review by DFO as part of the standard Fisheries Act Authorization process. Final offsetting ratios will be determined by DFO in consultation with First Nations and BW Gold and will adequately counterbalance the impacts to fish habitat.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2113	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		25-Aug-22	2	Follow up	Comment	No	Thank you for your response. We look forward to further discussions regarding the offsetting ratios during the Fisheries Act Authorization and Schedule 2 processes.	BWG acknowledges this comment		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2114	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	Page 6-51: Increase of downstream temperature of 5C in Davidson Creek is significant. Please include a paragraph and table here with a summary of temperature/flow simulation results. Specifically: -baseline vs. future flows and temperatures by month -implications for aquatic life and fish life processes The context of this residual effect may be changed to low if there are unmitigated effects. Please address this comment in a memo.	The requested information on water temperature changes in Davidson Creek is presented in the attached memo *Palmer 2022, Response to Information Requests #48 and #50 Comparison of Temperature in Davidson Creek with BCWQG* (see attached "R2_LDN_UFN_Comment ID 2114 and 2145.pdf").		LDN/UFN	Palmer	KP			Ready for Submission	TD; Aug. 12	Ready for Publishing
2114	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		25-Aug-22	2	Follow up	comment	No	Further comment on this topic is provided in comment ID 2145.	BWG acknowledges this comment		LDN/UFN	Palmer	KP			Ready for Submission	TD, Sept 19	Ready for Publishing
2115	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	6-52: So the natural flow regime cannot be replicated in Davidson creek without negative effects to Tatelkuz Lake and downstream Chadekuz lake. Please describe these negative effects and the supporting evidence. Secondly, if a natural flow regime cannot be replicated, please describe the habitat losses that are anticipated (e.g. loss of usable width, loss of flushing flows to remove fine sediment, habitat loss arising from channel instability). Please address this comment in a memo.	The potential for negative effects on Tatelkuz Lake and Chedakuz Creek have been described and evaluated as not significant in the Application/EIS (Sections 5.3.9.4.5). Follow-up monitoring to make sure these predictions are correct are detailed in the CEAA Condition 3.16 Follow-up Plan which has been attached. This latest version of the plan currently is undergoing review from other regulators and Indigenous Nations. Information regarding the potential effects of the planned instream flow needs (IFN) regime is presented in the attached memo Palmer 2016, Blackwater Project, Provincial EA Comments. Supporting technical information on Instream Flow Methodology and Fisheries (see attached "R2_LDN_UFN_Comment ID 2115.pdf"). As described in the response to IR 2144, sedimentation is not a major issue in Davidson Creek to to low proportion of fine sediments.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2115	Chapter 6 Environmental Assessment Predictions, Section 6.3.4.4	General	LDN/UFN (Brenley Yuan)		30-Aug-22	2	Follow up	Information requirement	No	In comment ID 2054, the original proposed IFN flushing flow of 1.12 m3/s was recommended instead of the newly proposed 0.56 m3/s. Under 1.12 m/s conditions, can you confirm that there would be no expected negative effects to Tatelkuz Lake and Chedakuz Creek?	The potential for negative effects on Tatelkuz Lake and Chedakuz Creek during peak flow and/or spring periods have been described and evaluated as not significant in the Application/EIS (Section 5.3.9.4.2 and Section 5.3.9.4.5). This evaluation was conducted based on a flushing flow equivalent to 1.12 m3/s.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2116	Appendix 7-A Aquatic Effects Monitoring Program Plan	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Comment	No	Figure 1-2: I cannot find the location of TSF Stage 1 SCP.	The location of the TSF Stage 1 SCP is provided on Figure 4.2-1 of the Aquatic Effects Monitoring Program Plan (Appendix 7-A). It was not provided on Figure 1-2 because the arrangement is representative of Year +23, and the TSF Stage 1 SCP is only in use during Construction (Year -1 and -2).		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2117	Appendix 7-A Aquatic Effects Monitoring Program Plan; Section 1.5.2	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Information requirement	No	"However, given that the predicted concentrations of dissolved aluminum are within the range of background concentrations to which resident aquatic biota have adapted, Project-related effects to aquatic biota were not predicted to occur." At WQ27 and WQ28, the summer/fall D-Al levels were approaching the SBEB, and the duration of >WQG levels are extended from spring only to spring, summer, and fall. Therefore this statement should be changed to acknowledge there may be potentail effects, which need to be closely monitored. Please address this comment in a memo.	BW Gold acknowledges the comment. The Application will not be revised during the Application Review period, therefore a memo will not be provided. A Science Based Environmental Benchmark (SBEB) has been proposed for dissolved aluminum. Upon approval of the SBEB for dissolved aluminum, it will replace the BC water quality guideline (WQG) for protection of aquatic life. An SBEB is only approved when it can be demonstrated that adverse effects to aquatic biota are not likely to occur (i.e., the SBEB offers a similar level of protection as a generic BC WQG). Predicted concentrations remain below the proposed SBEB concentration at all model nodes in Construction and Operations phases (which were the only two phases assessed in the Application). A residual effects assessment was provided for dissolved aluminum in section 6.3.4.3 (Chapter 6, Environmental Effect Predictions). Based on this residual effects assessment, "aquatic effects are not anticipated" from dissolved aluminum concentrations in Davidson Creek. Monitoring of aluminum (total and dissolved) in surface water and aluminum in sediment and fish tissue are monitoring components of the Aquatic Effects Monitoring Plan (Appendix 7-A)		LDN/UFN	Entia	ERM	Lesley/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing

2117	Appendix 7-A Aquatic Effects Monitoring Program Plan; Section 1.5.2	General	LDN/UFN (Brenley Yuan)		26-Aug-22	2	Follow up	Comment	No	Further to the reviewer's Round 3 comment ID 2063, pH levels below 6.5 will greatly increase D-Al toxicity in fish. I understand that pH will be monitored but without data on pH predictions during mine operations, the reviewer cannot assess whether the current sampling timing (monthly & 5-in-30 at select times) is sufficient. It may be that a more real-time monitoring program should be set up (perhaps a pH probe can be added to hydrometric stations) so that low pH can be detected in a timely manner.	Condition 26 of the Environmental Assessment Certificate requires BW Gold to ensure that the Project does not cause water quality to exceed BC water quality guidelines (WQGs) in Davidson Creek and Creek 661. This does include ensuring that discharges from the Project do not cause pH to go outside of the BC WQG range of 6.5 to 9.0 pH. The mass-balance water quality modelling used for this Project (see Chapter 5, Modelling Mitigation and Discharge) does not predict pH. However, there is no reason to believe that pH in discharges from the Project would be below 6.5, because pH is one of the factors considered in the operational requirements and discharge monitoring for water treatment plants. In addition, pH is a parameter that is reasonably straightforward to control as part of water treatment processes. Inline sensors in water treatment plants (WTPs; i.e., the Metals WTP, lime neutralization system, and Membrane WTP), will continuously monitor pH in effluent, as part of operational monitoring under the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E). In addition, pH will be monitored in effluent at the end of pipe (prior to discharge), as described in the MSDP (Appendix 9-E), and in the receiving environment (both in situ measurements and laboratory analysis), as described in the AEMP Plan in Appendix 7-A. Installing pH probes in receiving environments is not recommended due to calibration requirements (likely daily, at minimum) and sensitivity of the probes to damage or membrane fouling that could easily occur in an uncontrolled receiving environment (e.g., due to high TSS or impact with sediments or other materials/debris entrained in the water column).		LDN/UFN	Entia	ERM	Lesley/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
2118	Appendix 7-A Aquatic Effects Monitoring Program Plan; Section 3.1.2	General	LDN/UFN (Brenley Yuan)		Jul 27, 2022	1	New	Question	No	Figure 3.1-1: Creek 705 is identified as an upstream monitoring location. From our understanding, Lake 16 will be redirected into Lake 15, which drains into Creek 705. Can you confirm that Lake 16 is not affected in any way by the project? If it is, Creek 705 will not be a true upstream monitoring station.	Non-contact water will be diverted from Lake 16 to Lake 15, located near the headwaters of the Creek 705 watershed. There are predicted changes in flow to Creek 705 as a result of the diversions therefore Creek 705 is considered an impacted creek for the hydrology component only (see Section 4.1.6 of the Aquatic Effects Monitoring Program (AEMP) Plan; Appendix 7-A). As indicated in the AEMP Plan (Appendix 7-A, specifically Section 3.1.2 in the bullet point for Creek 705 watershed) "water quality in this creek is not expected to be influenced by Project effluent discharges or seepage and is, thus, considered to be a reference location for surface water quality". Effects from Project effluent discharge are seepage and are not expected to affect Creek 705 watershed water quality. Monitoring proposed in the AEMP Plan (Appendix 7-A) over time will identify if there are unexpected changes in water quality or aquatic biota in Creek 705, relative to other reference sites (e.g., 661-01 in upper Creek 661 or FC-01 in Fawnie Creek). If no changes are identified, then this waterway is an appropriate reference location for Davidson Creek.		LDN/UFN	Entia	ERM	Lesley/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2118	Appendix 7-A Aquatic Effects Monitoring Program Plan; Section 3.1.2	General	LDN/UFN (Brenley Yuan)		24-Aug-22	2	Follow up	Follow Up	No	Thank you for your response. This follow up comment also applies to comment ID 1027 regarding an upstream sediment monitoring point. We are concerned about the potential effects from construction of the channel between Lake 16 and 15 on the Creek 705 "control" site (705-05). We feel that site 705-05 could be an impact site if sediments/metals/contaminants are stirred up and exposed during the channel construction. While we support continued monitoring of site 705-05, we strongly feel that a better alternative for an upstream control site would be site WQ15 from Appendix 2-K "2011 TO 2020 BASELINE WATER QUALITY REPORT" (Table 3.1-1; page 3-3). This tributary of of Creek 705 drains an area close to the headwaters of Davidson Creek, and will not be impacted from any upstream works. Thus, this site can be more confidently assigned as an undisturbed site. We understand that monitoring at site WQ15 has been conducted from 2011-2020, and thus should not have any issues with access/logistics. We also wish to request that if feasible, to add an upstream control site at Creek 688328, a tributary of Davidson Creek. The upper portion of this creek is not affected by the project, and would serve as a good additional control site within the Davidson Creek watershed (as there currently are not any within this watershed)	Monitoring of potential impacts associated with construction of the channel between Lake 15 and Lake 16 would be under the Construction Environmental Management Plan. Mitigation measures would be adopted to minimize the potential for effects associated with construction activities. Potential impacts, if any, would be short term and associated with construction activities, and localized in extent of effects. Water quality modelling and effects assessment completed for the Project do not identify potential effects to Creek 705 from Project operations, discharges, seepage, or diversions. As indicated in Chapter 6 of the Application and in previous responses, water quality, sediment quality, and aquatic biota in Creek 705 are not predicted to be affected by Project activities. In the event that these media or biota are unexpectedly affected by the Project, there are multiple alternative reference sites available for Davidson Creek. See response to the Round 3 response to Comment ID#1027 for how control and impact sites were selected for the purpose of the Aquatic Effects Monitoring Program (AEMP; i.e., use of the Before-After-Control-Impact study design). In addition, the Round 3 response to Comment ID#1027 provides rationale for why 705-05 and not WQ15 is an appropriate control (reference) site for the AEMP.		LDN/UFN	Entia	ERM	Lesley/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
2118	Appendix 7-A Aquatic Effects Monitoring Program Plan; Section 3.1.2	General	LDN/UFN (Brenley Yuan)		06-Oct-22	3	Follow up	Follow Up	No	How will you know whether media/biota at 705-05 were unexpectedly affected by the project or if these changes are natural? If there is insufficient baseline data for the proposed WQ15 station, can you concurrently monitor 705-05 against WQ15 until you can reasonably establish that 705-05 is unaffected by the project?	See also response to Round 4 Comment ID #1027. It is BW Gold's opinion there are already sufficient control (reference) sites included in the Aquatic Effects Monitoring Program Plan (Appendix 7-A). The control sites are located throughout the study area in the event that Creek 705 is identified as being unexpectedly impacted by the Project.		LDN/UFN	Entia	ERM	Lesley/Tonia		Ready for Submission	TD, Oct 17	Ready for Publishing
2119	Appendix 9-F	Table 8.1.1	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Table 8.1-1. Add examples of safety reasons why vegetation would not be kept at a 1m height from the ground	Potential safety reasons will be dependent on the accessibility and site conditions and will be addressed in the Transmission Line Vegetation and Access Management Plan under a separate application. These reasons may also be identified by a QP at the time of maintenance.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2119	Vegetation Management Plan Appendix 9-F	Table 8.1.1	LDN_UFN (Danny Smart)		24-Aug-22	2	Follow up		No	For clarity within the plan, please add examples to table 8.1-1	No examples will be provided in Table 8.1-1 of th Vegetation Management Plan. As stated in response to the Round 2 comment, potential safety reasons will be identifed by a qualified professional at the time of maintenance. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
2119	Vegetation Management Plan Appendix 9-F	Table 8.1.1	LDN_UFN (Danny Smart)		06-Oct-22	3	Follow up		No	For clarity to the reader and to provide a better context why vegetation may not be kept at a 1m height from the ground, please add examples into the post-clearing section of table 8.1.1 why this may happen. A comment such as "potential safety reasons identified by a qualifid professional may include X, Y, Z"	As identified in the response to Round 2 and 3, a qualified professional will determine at the time of maintenance, if accessibility and site conditions are not amenable to maintainance of vegetation to a height of 1 m. Therefore to provide clarity to the reviewer an example will be provided in the statement "...or where not feasible for safety reasons identified by a qualified professional (e.g., slope unsafe for acesss)." It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	TD, Oct 19	Ready for Publishing
2120	Vegetation Management Plan Appendix 9-F	Table 8.1-1	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Update herbicide use reference. It is appendix F in the IPMP, not E.	Thank you for noting this error, the reference will be updated in Table 8.1-1 of the Vegetation Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing

2121	Vegetation Management Plan Appendix 9-F	Section 8.2	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	The IPMP does not discuss avoiding herbicide spray within 200m of rare plant and ecosystems at risk. Please add this information to the IPMP with references to why this distance is used. In addition, a 30m buffer is only discussed for domestic and agricultural wells and intakes, not natural water features. Please clarify this reference within the VMP.	The statement in the Vegetation Management Plan (VMP) will be revised as follows: "Avoid use of herbicide sprays within 200 m of rare plants and ecosystems at risk and water, and limit herbicide use to direct application rather than broadcast sprays in accordance with the Rare and At-Risk Plant Species Management SOP". The reference to water will be deleted from this section and is discussed (and referenced) more appropriately in Section 8.3 of the VMP. Additional text will be included to comply with LDN Herbicide Use (received August 3, 2022) indicating chemical treatment of invasive plants will not be completed within 100 m of identified harvesting areas or riparian areas. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2122	Vegetation Management Plan Appendix 9-F	Section 8.2	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Please provide StFN and NWFN Nation herbicide policy as an appendix as you are refering to them in the VMP	BW Gold has been made aware that these policies exist, and has requested them from the Nations, but has not receive copies to date.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2122		Section 8.2	LDN_UFN (Danny Smart)		24-Aug-22	2	Follow up		No	Commetn #691 also states that KES does not represent Stfn and NWFN, therefore it is Artemis's responisbility to receive these documents and incorprate them into the plan for us to review and ensure the policies are being followed within the management plan. Within the IPMP and VMP plans it states that herbicide use will meet and comply with the Stfn and NWFN herbicide use policies. However, as BW Gold have acknowledged in their response to commetn #691, "the company has never been provided with a copy of the policy, only been told there is a policy prohibiting use within the Stfn and NWFN territories". Therefore, please explain how Artemis will follow these policies if they have not receieved or reviewed the documents to begin with?	As stated in response to Comment ID#691, The mitigation 'Comply with the StFN herbicide use policy in StFN territory' is mitigation 5-15 of the Mitigation Table, submitted to the Environmental Assessment Offices to address the Environmental Assessment Condition 43. Therefore in the first draft of the Invasive Plant Management Plan (IPMP), BW Gold committed to adhering to StFN and NWFN herbicide use policy. In the case that herbicide is prohibited in the territory at which the invasive plant species is identified, an alternative treatment will be developed in consultation with Indigenous nations.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Sept 14	Ready for Publishing
2122		Section 8.2	LDN_UFN (Danny Smart)		06-Oct-22	3	Follow up		No	Please confirm Artemis has received Stfn and NWFN policies and attach these policies to the associated plans that they are referenced in (i.e., IPMP and VMP). If Artemis is committing to adhering to these policies, they must be included as part of the plans for review.	BW Gold acknowledges the comment, however the company has never been provided with a copy of the policy, only been told there is a policy prohibiting use within the StFN and NWFN territories. If a policy is provided, it will be appended in a future iteration the plan.		LDN/UFN	BWG		Travis		Ready for Submission	TD, Oct 17	Ready for Publishing
2122		Section 8.2	LDN_UFN (Danny Smart)		17-Nov-22	4	Follow up		No	If BW Gold has not received these policies, please explain how you propose to follow their guidelines within the IPMP, VMP, and Riparian SOP where they are referenced.	BW Gold has not received written policies from StFN and NWFN regarding herbicide use in their Traditional Territory. However, SFN, StFN and NWFN have verbally expressed that herbicides are not to be used within their Traditional Territory. In absence of a written policy, BW Gold is committed to complying with the verbal position on herbicide use within Indigenous nation territories. As stated in the Round 5 response to Comment ID#630, the Invasive Plant Management Plan has been updated to reflect that BW Gold will comply with LDN's written herbicide use policy and the verbal position on no herbicide use with the territories of UFN, SFN, StFN, and NWFN. The potential treatment options for invasive plant management will be updated to include cultural control methods (instead of chemical treatment) in addition to mechanical and biological control. The Vegetation Management Plan will be updated to state that BW Gold will comply with Indigenous nation herbicide use policies (written or verbal) and refer to the IPMP regarding potential use of herbicides when a Qualified Professional has deemed it to be the only effective method of control and has been approved (by the Indigenous nation) for use in a Traditional Territory. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	BWG					TD, Nov 24	Ready for Publishing
2123	Vegetation Management Plan Appendix 9-F	Table 8.3-3 (buffers)	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Provide examples for "except when not possible for safety reasons"	Safety reasons will be dependent on the site conditions and work activity to be completed within the buffer for example if work is near steep banks and/or fast flowing streams and limit the ability to maintain line of site on the work.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2123	Vegetation Management Plan Appendix 9-F	Table 8.3-3 (buffers)	LDN_UFN (Danny Smart)		24-Aug-22	2	Follow up		No	For clarity, please provide examples in table 8.3-3	No examples will be provided in Table 8.3-3 of the Vegetation Management Plan. As stated in response to the Round 2 comment, safety reasons will be dependent on the site conditions and work activity. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Sept 14	Ready for Publishing
2123	Vegetation Management Plan Appendix 9-F	Table 8.3-3 (buffers)	LDN_UFN (Danny Smart)		06-Oct-22	3	Follow up		No	For clarity to the reader and to provide a better context why the IEM will not monitor work completed within the buffer area, please add examples into the buffer section of table 8.3-3 why this may happen. A comment such as "potential safety reasons identified will depend on site conditions and work activity such as X, Y, Z"	To clarify for the reviewer, the following statement will be provided in the Table 8.3-3 of the Vegetation Management Plan: "An Independent environmental monitor will observe work being completed within the buffer except when not possible for safety reasons dependent on the site conditions and work activity (e.g., the work is being completed near steep banks and/or fast flowing streams that may limit the ability to safely maintain a line site on the work)" It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission		Ready for Publishing
2124	Vegetation Management Plan Appendix 9-F	Section 11	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Explain the meaning of adaptive management and the purpose of the TARP	The adaptive management framework for vegetation management is provided in Section 5 of the Vegetation Management Plan (VMP). Monitoring of vegetation management will be reviewed to update relavant standard operating procedures and/or the VMP. The Trigger Action Response Plan (TARP) for Terrestrial Ecosystems (Table 11-1) provides a means for evaluating the monitoring metrics identified in Section 9 of VMP (e.g., total area cleared) against approved mitigations or targets (e.g., Environmental Assessment or Environmental Assessment Certificate) and/or regulatory requirements (e.g., riparian buffers). Trigger levels are provided (Level 0, 1, and 2) to determine the effectiveness of mitigations and if additional measures or response is required.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2124	Vegetation Management Plan Appendix 9-F	Section 11	LDN_UFN (Danny Smart)		30-Aug-22	2	follow up		No	For clarity, please provide definitions in the plans	The definitions provided in response to the Round 2 comment will be provided in the next iteration of the Vegetation Management Plan. It is BW Gold's understanding that this comment is now considered resolved as it relates to the Application Review phase of the permitting process. BW Gold understands this comment will be carried forward by LDN/UFN for use in post-permitting processes involving review of revised management plans.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	TD, Sept 14	Ready for Publishing
2125	Vegetation Management Plan Appendix 9-F	Table 11.1 (Pre-clearing surveys and flagged clearing boundaries)	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Identify a metric that clearing exceeds to in order to identify between action level 1 and 2	If clearing extends beyond the *Mines Act* permit boundary a Level 2 action/response is triggered.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing

2126	Vegetation Management Plan Appendix 9-F	Table 11.1 (Migratory birds)	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Information requirement	No	Add information for if clearing is conducted outside of the migratory bird window and what the responses would be. Why is this not included for level 1 and 2?	Table 11-1 of the Vegetation Mangement Plan (VMP) will be revised to indicate there will be a Level 2 trigger if clearing occurs outside the sensitive period (i.e., breeding period) or clearing window and buffers were not established in accordance with methods detailed in Section 4.7.2.1 of the Wildlife Mitigation and Monitoring Plan (row 4). If a Level 2 Alert is triggered the following actions/responses will be implemented: notification of Indigenous groups and regulators; the Environmental Manager will review clearing plans with site personnel and identify causes; evaluation and revision of the onsite approval processes, pre-clearing methods, or monitoring program requirements; implemetation of the revisions based on the evaluation as required and the VMP will be updated accordingly. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2127	Invasive Plant Management Plan Appendix 9-G	Appendix B	LDN_UFN (Danny Smart)		Jul 27, 2022	1	New	Clarification	No	Has two factsheets for two different species. Meadow salisify was not included in the baseline summary section. Adjust language if it was recorded or remove from appendices.	Appendix B will be revised to only include Yellow salsify (*Tragopogon dubius*) in the next iteration of the Vegetation Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2128	Mine Site Water Management Plan/9.7 Discharge Management Plan	Professional Practice Areas	LDN_UFN (Christina Delaney)		Jul 27, 2022	1	New	Clarification	Yes	The professionals who wrote this management plan include two biologists (one indicated with the role of Senior Environmental Scientist one with the role of ecotoxicologist), and a third biologist who is also a PGeo. The PGeo is indicated with the role of geochemist. Additionally an individual without a designation indicated. Who prepared the hydrology, geology, geotechnical and hydrogeology assessments, determinations and designs contained within this management plan and what are their qualifications and practice rights within those topic areas?	This management plan consolidates information from many original documents that were developed by individuals with appropriate qualifications and practice rights. Please refer to the certification pages of each of the following reports for the specifics: •The water balance report (Application Appendix 5-B) •The water quality model report (Application Appendix 5-D) •The geochemical source term report (Appendix A-6 of Application Appendix 5-D) •The numerical groundwater model report (Application Appendix 5-F) •The Groundwater Baseline Report (Application Appendix 2-J) •The Hydrology and Water Temperature Baseline Report (Application Appendix 2-I) •The Climate Baseline Report (Application Appendix 2-A) •The Hydrometeorolgoy Report (Application Appendix 2-B) •The TSF Life of Mine Design Report (Application Appendix 3-K) •The TSF Stage 1 Detailed Design Report (Application Appendix 3-J) •The Water Management Structures Detailed Design Report (Application Appendix 3-O) •The Open Pit Slope Design (Application Appendix 3-B) •The Stockpiles Geotechnical and Water Management Design Report (Application Appendix 3-N) •The Metals WTP Design Report (Application Appendix 5-G) •The membrane WTP Design Report (Application Appendix 5-H)		LDN/UFN	Lorax	KP			GM; Aug 15	Ready for Publishing
2128	Mine Site Water Management Plan/9.7 Discharge Management Plan	Professional Practice Areas	LDN_UFN (Christina Delaney)		23-Aug-22	2	Follow Up	clarification	No	We requset that this document is reviewed and that the reviewers are to be listed on this consolidated document, to ensure the information was summarized and presented accurately for each sub-topic.	BW Gold thanks you for this comment. BW Gold respectfully disagrees with the request for each QP that authored and/or reviewed the fifteen listed sealed reports that inform Appendix 9-E to additionally review and be listed in Appendix 9-E to 'ensure the information was summarized and presented accurately for each sub-topic'. For context, this would amount to more than 25 individuals to act as a reviewer of the document, which will be updated to incorporate feedback during the MRC process, and updated on a semi-regular basis throughout the operating life of the mine. Appendix 9-E fulfills the JAIR requirement for this Plan to be developed based on the integration of a number of inter-disciplinary areas (meteorology and climate studies, water quantity and quality baseline studies, the site-wide water balance model, surface water quality model, numerical groundwater model, treatment requirements, discharge requirements and the mine plan). All		LDN/UFN	Lorax	KP			Sept. 23	GM; Sept 23	Ready for Publishing
2128	Mine Site Water Management Plan/9.7 Discharge Management Plan	Professional Practice Areas	LDN_UFN (Christina Delaney)		06-Oct-22	3	Follow Up	clarification	No	We request input from MMO/EMLI as to authorship standards in regards to this comment.	This comment is acknowledged. BWG expects that LDN_UFN will approach MMO/EMLI directly with respect to auhorship standards.		LDN/UFN	Lorax	KP				GM; Oct 28	Ready for Publishing
2129	Wetlands SOP, Section 5.1		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Comment	No	A pre-clearing and pre-works survey should be conducted to identify environmentally sensitive features (e.g. nests, hibernacula). Furthermore, amphibian/wildlife salvage should be conducted pre-works. Please add to SOP.	Pre-clearing surveys to identify environmentally sensitive features in addition to amphibian/wildlife salvage if required are detailed in the Wildlife Mitigation and Monitoring Plan (Appendix 9-H) Section 5.1 of the Wetlands Management Standard Operating Procedure provides the pre-clearing procedures (i.e., define clearing limits and identify buffers) for the protection of wetlands during constructions. Therefore the additional procedures will not be added to the standard operating procedure.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2130	Wetlands SOP, Table 5.2-1		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Comment	No	Machinery should be equipped with a spill kit and fire extinguisher. Please add to SOP	The Fuel Management and Spill Control Plan (Appendix L) details requirements for spill kits and fire extinguishers for the mine site (including vehicles and machinery). Table 5.2-1 of the Wetlands Management Standard Operating Procedure provides procedures specific to protection of wetlands during construction. Therefore the additional procedures will not be added to the standard operating procedure.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 7	Ready for Publishing
2131	Appendix 7-A, Section 4.3.1		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	Table 4.2-3: Table states that continuous data is downloaded every visit. Since you are installing real-time hydrometrics stations, are you not able to have data transmitted online in real-time? Having access to real-time data is crucial for the trigger response plan. Please provide memo confirming that real-time data will be available online.	A memo is not required as no changes will be made to the AEMP at this time in response to the comment. Work is underway to convert the current hydrometric/temperature monitoring network to a cellular telemetry-based monitoring network. Ultimately, this will allow a more continuous, real-time monitoring network to be established. Once details of this monitoring network are worked out, the AEMP Plan will be updated as needed to reflect the equipment, methods, and data analysis for both hydrology and water temperature.		LDN/UFN	KP	Entia	Lesley		Ready for Submission	RT; Aug. 7	Ready for Publishing
2132	Appendix 7-A, Section 4.3.2.4		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Comment	No	It is recommended that staff gauges are only used when they are installed in a very stable location (e.g. concrete abutments, large trees/boulders in a very low energy creek).	Thank you for the advice. Staff gauges will only be installed in low energy creeks with a stable anchoring location.		LDN/UFN	KP		Michael	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing
2133	Appendix 7-A, Section 4.4.1.3		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Comment	No	It is important to recognize that there may be instances where project effects may not be detected at near-field sites but rather at mid-field and far-field sites. For example, temperature increases due to surface flow reduction may not be detected near-site if there are significant groundwater contributions locally, thereby increasing the proportion of cold groundwater input. But the effects of flow reduction may be detected further downstream when the proportion of groundwater input is lower. This is only one example. The main point of this comment is that further analysis of the data may be necessary to eliminate the possibility of project-related effects when we see changes from baseline at mid-field and far-field sites, but not near-field sites. This applies to other parameters measured.	Data interpretation in Aquatic Effects Monitoring Program (AEMP) reports will consider a number of potential factors. Data collected under monitoring programs conducted within the mine site (e.g., Mine Site Water and Discharge Monitoring Plan, Groundwater Monitoring Plan) as well as information about changes in land use or non-Project activities within the broader LSA (e.g., changes in forestry or agricultural activities) will also be considered in the interpretation of AEMP results. As indicated in Section 4.2 and Table 4.2-1 of the AEMP Plan (Appendix 7-A), the first three sites downstream on Davidson Creek (extending to almost 8 km downstream of the FWR at sites DC-05, DC-10, and DC-15) and Creek 661 (extending almost 4 km downstream of the mine site to 661-10) are identified as near field sites. Given that the near field sites extend a large distance downstream from the Project, if effects due to the Project were to occur then they would be apparent in near field AEMP monitoring, end-of-pipe monitoring, or groundwater quality monitoring before they would be apparent in mid or far field sites. Environmental Assessment Certificate Condition 26 indicates that the proponent cannot cause water quality to exceed BC water quality guidelines or approved Science-Based Environmental Benchmarks in Davidson Creek or Creek 661. Evaluation of data at the discharge points (end of pipe, under the Mine Site Water and Discharge Monitoring and Management Plan) and at near field sites, in relation to guidelines and in relation to control sites, provides the most conservative assessment of whether or not the Project is causing effects.		LDN/UFN	Entia	KP			Ready for Submission	RT; Aug. 7	Ready for Publishing

2134	Appendix 7-A, Section 4.4.2.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Comment	No	Pg 4-20: consider doing triplicate water samples if initial results show large variance.	Triplicate water sampling for QA/QC purposes is not warranted and is not recommended. Section 4.3.2. of the Surface Water Quality Baseline Report (Appendix 2-K) details the field duplicate relative percent difference (RPD) analysis completed since 2015 for surface water quality samples. The RPD analysis has indicated that variability is typically within the acceptable range (>95% of calculated RPDs had variability of less than 20%). Some heterogeneity in stream samples in particular is to be expected, especially during freshet, and there was nothing in the QA/QC data to indicate that sample contamination or analytical error was a systemic issue. In general, the future monitoring under the AEMP proposes the continued use of the same water quality sampling sites that were used in baseline programs. Thus, it can be expected that the level of variance observed in baseline programs will be similar to the level of variance seen in future monitoring.		LDN/UFN	Entia	ERM	Lesley/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2135	Appendix 7-A, Section 4.7.2.1		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	CABIN should be conducted in late summer or fall as most taxa are in their aquatic stage and advanced enough for detailed taxonomic identification. So it should occur in September at the earliest, not August. Please confirm in memo that CABIN will be conducted in September at the earliest.	A memo is not required because no changes will be made to the Aquatic Effects Monitoring Program (AEMP) in response to the comment. As indicated in Section 4.7.2.1 of the AEMP, CABIN sampling (and other aquatic resource sampling) will occur in late August or early September. The period was selected to coincide with 'late summer or early fall' based on air temperatures, water temperatures, stream flow conditions, and weather patterns for the region. The timing of sampling in the AEMP is also consistent with the time periods during which sampling was conducted in baseline studies (and there have not been issues with taxonomic identification during this period in baseline sampling). The timing for CABIN sampling identified in the AEMP is also consistent with recommendations from BC ENV regarding the timing of baseline sampling for aquatic biota ("mid-August to mid-September", page 90 of BC ENV 2016) and from ECCC (2012) in guidance for conducting CABIN sampling ("late summer or early fall" on page 7 of ECCC 2012). There is also the risk that by delaying sampling until later in September sampling could result in the streams being influenced by higher flows (due to fall rains), which could skew the results of the sampling relative to baseline conditions and is inconsistent with CABIN guidance which specifies that sampling should occur during low flow conditions. References: BC ENV. 2016. Water and Air Baseline Monitoring Guidance for Mine Proponents and Operators, Version 2. (https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/water_air_baseline_monitoring.pdf) ECCC. 2012. Canadian Aquatic Biomonitoring Network Field Manual - Wadeable Streams. (https://publications.gc.ca/collections/collection_2012/ec/En84-87-2012-eng.pdf)		LDN/UFN	Entia	ERM	Lesley		Ready for Submission	RT; Aug. 7	Ready for Publishing
2136	Appendix 7-A, Section 4.8.1.2		LDN/UFN Brenley Yuan		24-Aug-22	1	Follow up	Information requirement	No	Thank you for your response. Are there currently provisions in place to extend monitoring further downstream if effects are detected in the current monitoring sites? It would be important to determine how far effects extend. The same question applies to water quality monitoring.	There are provisions in the Aquatic Effects Monitoring Plan (AEMP) Plan to modify the extent and types of monitoring in the event that Project related effects are identified. The adaptive management trigger response framework in Section 6 includes a management response in each of the tables for water quality, sediment quality, periphyton, benthic invertebrates, and fish tissue (see Tables 6.2-2 to 6.2-5 in the AEMP Plan) that indicates a sampling program will be planned or implemented (depending on whether it is the medium or high action level) to "define the magnitude, spatial extent, and reversibility of the effect". Reference to "extent" in the management action indicates that sampling would be extended to further downstream locations, if needed. Additional monitoring may also be proposed to monitor effectiveness of modified or new mitigation measures.		LDN/UFN	Entia	Palmer	Lesley/Tonia		Ready for Submission	TD, Sept 14	Ready for Publishing
2136	Appendix 7-A, Section 4.8.1.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	Please add fish inventory and tissue sampling locations in lower Davidson Creek (DC-20), lower Turtle Creek (TC-15)? These represent some of the more productive areas. If it is to reduce impacts to kokanee spawners, a lower impact method (minnow trapping or seining) could be used. Please provide revisions in a memo.	A memo is not required because no changes will be made to the Aquatic Effects Monitoring Program (AEMP) Plan (Appendix 7-A) in response to the comment. As noted by the reviewer, fish tissue sampling is not proposed for lower Davidson Creek (DC-20) or Turtle Creek (TC-15) in areas that where there is potential to cause disruption or damage to fish eggs (kokanee) present in the stream substrates at the time when fish tissue sampling would occur. As indicated in the AEMP, spawning and escapement surveys are proposed as alternatives to in-stream sampling in these areas. In addition, sampling of three adult fish species of interest in Tatelkuz Lake, as identified by LDN/UFN, is already included in the AEMP and includes kokanee and rainbow trout which are using the streams for spawning. Turtle Creek is not a location where point source discharge (e.g. effluent) potential effects from the Project are expected to occur. The only Project infrastructure with the potential to influence Turtle Creek are the access road and the proposed air strip. There are no proposed Project effluent discharges to Turtle Creek and seepage is not likely to report to this creek. The sampling proposed in the AEMP Plan (Appendix 7-A) is expected to be sufficient to identify effects assocated with non-point source discharge (e.g., surface run off or dust) associated with operation of the air strip. The AEMP sampling sites included in the AEMP Plan (Appendix 7-A) for monitoring fish tissue in Turtle Creek include an upstream reference site (TC-01) and two sites downstream of the airstrip (TC-05 and TC-10). If effects were to occur in Turtle Creek, it is highly unlikely that potential effects would extend beyond the second downstream monitoring site (TC-10). There are two proposed sites for fish tissue sampling (DC-05 and DC-15) in Davidson Creek and if effects were to occur they are unlikely to extend past DC-15 (7.9 km downstream of the freshwater reservoir discharge). While point source discharges are planned for Davidson Creek near the mine site (i.e., from the FWR freshwater reservoir and sediment control ponds), the proponent is required to comply with Environmental Assessement Certificate (EAC) Condition 26 to ensure that the Project does not cause water quality to exceed BC water quality guidelines or approved science based environmental benchmarks. Provided that EAC Condition 26 is met, no effects would be expected to aquatic biota in Davidson Creek as a result of the Project.		LDN/UFN	Entia	Palmer	Lesley/Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing
2137	Appendix 7-A, Section 4.2 and 4.8.2.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	Generally, spawning surveys are conducted by walking the entire length of the known spawning range in the creek (i.e. from mouth to the upper limits of spawning). Conducting spawning/escapement surveys at 500 m sections of creek is highly insufficient given the lengths of these creeks, and will produce pretty meaningless data. Efforts may be reduced by conducting complete walks in the first few years to get a sense of where fish like to spawn and hold, and eliminating small sections where there are consistently no fish. But the area covered must be a lot bigger than 500 m per creek. Please amend survey program in a memo.	The suggested effort to determine common spawning and holding areas for Kokanee has been completed in past studies (2011-2013 [Application/EIS Appendix 5.1.2.6A Fish and Aquaitc Resources 2011-2012 Baseline Report, AMEC 2013; Application/EIS Appendix 5.1.2.6B, Fish and Aquatic Resources 2013 Baseline Report, AMEC 2013], 2021 [Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report, Palmer 2022]). The proposed spawning surveys take this spawning location information into account. The sampling effort in Davidson Creek includes the entire known distribution of Kokanee spawning areas (Reaches 1 to 4), of which a representative 500 m section will be selected to compare against the other impacted and reference streams. The 500 m sections in other streams have been placed to cover known spawning areas with a reasonable amount of effort, without including the entire lengths of these much larger streams.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing

2137	Appendix 7-A, Section 4.2 and 4.8.2.2		LDN/UFN Brenley Yuan		24-Aug-22	2	Follow up	Comment	Yes	Thank you for your response. There are remaining concerns regarding this sampling program for sites outside of Davidson Creek. Due to the dynamic nature of sediment transport processes in creeks, pockets of suitable gravel naturally shift each year. Flow during the spawning period also changes year to year, depending on weather and other factors. Therefore, suitable gravel/hydraulics shift annually and it is not uncommon for salmonids to preferentially select different areas of creek to spawn each year. A major concern surrounds the ability to tease out whether changes in spawners are truly due to a decline in population, or whether the fish have simply spawned elsewhere. I have monitored sites where changes in spawner use at the site do not always track with changes in total escapement of the creek. This uncertainty cannot be quantified and therefore can make interpretation of data almost impossible. The whole point of this program is to track population trends in Davidson Creek against the larger population of Chedakuz creek to determine whether population changes are due to project impacts. Therefore, the program needs to produce data that we are comfortable working with. We feel that the survey area has to be greatly increased, particularly during the early years when not much is known about the distribution of Kokanee and how their distribution changes from year to year. We understand that the fisheries monitoring program is still evolving and request that the proponents continue working with KES to improve the Kokanee spawner survey program. The proponents have mentioned that UAV technology worked well for Chedakuz Creek adult enumerations so that may be one way to expand the survey area to longer sections of creek. Another suggestion is to include the monitoring of substrate size at set cross-sections to exclude the possibility that fish have simply spawned elsewhere due to unsuitable habitat. We are open to different methods as long as the end result is a program that captures meaningful data. Being able to rely on the land for sustenance and traditional use is a priority for LDN and UFN. Monitoring of Kokanee populations is an important aspect of this.	BW Gold is committed to engaging with LDN/UFN to further develop a technically feasible and statistically robust Kokanee Spawner Follow-up Program. This process will be facillitated through existing bi-weekly fisheries meetings with LDN and UFN.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2138	Appendix 7-A, Section 4.8.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	Yes	It is highly recommended that detailed spawning habitat data beyond glide/riffle/pool be collected at redds and compared against preferences found in literature. Specifically the following data should be collected at each redd patch: -D50 (visual estimation as to not disturb redds) -qualitative assessment of fines (low=<14% fines, moderate=14-50% fines, high=>50%) - again visual estimation -water depth at redd patches -water velocity at redd patches -area of redd patches and density of patches (to get effective spawning area) This provides insight as to whether they are selecting prime habitat, or whether prime habitat has become limited and they are forced to choose sub-optimal habitat. Please add a spawning habitat survey component in a memo.	The selection of prime spawning habitat under baseline conditions can be assumed. Spawning habitat is abundant in the lower reaches of Davidson Creek and spawning surveys indicate that occupancy of suitable spawning habitat is high, regardless of quality. Identification of spawning locations and distribution by reach has been completed in past studies (2011-2013 [Application/EIS Appendix 5.1.2.6A Fish and Aquaitc Resources 2011-2012 Baseline Report, AMEC 2013; Application/EIS Appendix 5.1.2.6B, Fish and Aquatic Resources 2013 Baseline Report, AMEC 2013], 2021 [Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report, Palmer 2022]). Expansion of the spawning range in an upstream direction (i.e., into presumably less suitable habitats) may indicate a shift in habitat selection. Long-term monitoring of the upstream limit of spawning and spawner distribution within reaches will determine whether any deviation from current spawning locations or distribution is occurring, likely to sub-optimal habitat, during the planned instream flow needs (IFN) flow regime. Therefore, collection of the suggested detailed spawning habitat measurements, that would be highly variable temporally and spatially, would not be effective and is not neccessary.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2138	Appendix 7-A, Section 4.8.2		LDN/UFN Brenley Yuan		25-Aug-22	2	Follow up	Comment	No	Thank you for your response. The reviewer is of the opinion that some measure of spawning habitat quality should be measured to support Kokanee surveys as described in the Round 3 follow up comment 2137. Several transects can be set up to capture variability within a creek. GPS points of redds or redd patches should also be documented to collect data on the spatial distributions of spawning activity. This enables much higher analytical power in the future when new research questions arise. For example, spatial distribution patterns of spawning activity can be used to support narrowing of the spawning survey areas in the future.	BW Gold reiterates that occupancy of suitable spawning habitats in Davidson Creek is high and detailed spawning habitat measurements would be highly variable temporally and spatially, and would not provide and effective measure habitat use. The reviewers suggestion in IR 2142 of taking measurements of substrate size has merit, particlalry if placed near the upstream and downstream ends of known spawning areas. These samples could measure potential changes such as long-term sedimentation due to lower flows, or gravel accumulation or loss. A version of this sediment quality sampling is already planned as part of the AEMP (Section 4.5.1, Appendix 7-A, Aquatic Effects Monitoring Plan) at two locations in Davidson Creek, and at other impacted streams and reference sites. Additional sites can be added to Davidson Creek to include some identified spawning areas.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2138	Appendix 7-A, Section 4.8.2		LDN/UFN Brenley Yuan		06-Oct-22	3	Follow up	Comment	No	The reviewer agrees that monitoring substrate size composition at upstream and downstream ends of spawning areas, along with 2-3 key spawning areas in-between, would strengthen the monitoring program. However, spawning substrate monitoring should be kept separate from Section 4.5.1 (sediment quality monitoring). The sediment quality monitoring only measures substrate composition in the lower size range (clay to gravel), which represents relevant sizes for sediment quality but not spawning substrate (which looks at the full range of sizes). Furthermore, the sediment quality sampling sites target the upper portions of creeks, and misses some lower spawning habitat. The reviewer suggests continuing this discussion in conjunction with the spawner survey program in the bi-weekly fisheries meetings. Once an agreed-upon plan is available, the AEMP can be revised accordingly. The reviewer also recognizes there are commitments to measure spawning substrate size under the updated Condition 3.14 follow-up program (dated September 2022; Table 3.6, page 13). The reviewer plans on providing comments with respect to this topic in Condition 3.14 to include more sampling sites. The reviewer also understands that Condition 3.14 covers Davidson Creek and not other creeks. Because these separate plans have some overlapping topics, it would be important to have these two documents be consistent once an agreed-upon plan is available.	BW Gold agrees to further discuss sediment quality sampling plans with the Nations during the bi-weekly fisheries meetings. As recently discussed in the bi-weekly fisheries meeting, adjustments to the AEMP methods are ongoing, to incorporate feedback from First Nation reviewers and other sources. Inclusion of sediment characterization via pebble counts (or another method suggested by the reviewer) will be included in the method revision.		LDN/UFN	Palmer					TD, Oct 24	Ready for Publishing
2139	Appendix 7-A, Section 4.8.3		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	This section is confusing as it refers to "escapement surveys" (which refers to adults returning to spawn) but to my understanding, this section is targeted at juvenile fry. If my understanding is correct, please remove the use of "escapement" in this section, including the title. There are also various mentions of "spawning survey" throughout this section. Please edit to make clear which lifestage you are targeting. I am assuming that this section refers to juvenile fry only as the previous section already described kokanee spawner surveys. Please address this comment in a memo.	The reviewer is correct that salmon escapement is the amount of a salmon population that does not get caught by commercial or recreational fisheries and return to their freshwater spawning habitat. Kokanee fry leaving their natal streams is referred to as outmigration, to which Section 4.8.3 is referring. The previous and planned surveys estimate the number of outmigrating fry from Davidson Creek. This term should be changed throughout the document in a subsequent revision.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2140	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	Turtle Creek can no longer be a control site for Rainbow Trout spawners after the construction of the airstrip. It is recommended that TC-15 be kept as a monitoring site, and another control site should be used. Please address this comment in a memo.	The airstrip is planned to be constucted parallel to Turtle Creek, outside of the 30 m riparian buffer (Appendix 7-A, Figure 1-2). As stated in the AEMP, until the airstrip is constucted, Turtle Creek sampling sites will be considered reference sites. The schedule for airstrip construction currently is indeterminate.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2140	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		25-Aug-22	2	Follow up	Comment	No	The reviewer agrees that the Turtle Creek sampling site will be a reference site until the airstrip is constructed. But after airstrip construction, it will not be considered an undisturbed site, even if mitigation measures (i.e. 30 m buffer) are in place. There are no other known Rainbow Trout sampling sites which satisfies the criteria of an undisturbed control site, which is crucial to a BACI sampling design.	A potential location for an additional control site is on upper Chedakuz Creek, immediately upstream of its confluence with Creek 661 and near across from the 661-20 sampling site shown in the AEMP (Figure 4.2-1, Appendix 7-A, Aquatic Effects Monitoring Plan). BW Gold is willing to discuss the potential future addition of a control site in this location with LDN/UFN to further develop a technically feasible and statistically robust Rainbow Spawner Follow-up Program.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2140	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		06-Oct-22	3	Follow up	Comment	No	The proposed control site sounds like a reasonable location so long as there isn't too much noise from the Kuyakuz Lake population. Is there much known about habitat use distributions by both Tatelkuz and Kuyakuz lake populations? What about the eastern tributaries to Tatelkuz Lake? Are any of those feasible sites?	The potential control site on upper Chedakuz Creek has a separate population of rainbow trout from Davidson Creek (Section 5.10.3.7 Microsatelite DNA Analysis of Appendix 5.1.2.6A Fisheries Baseline of the EIS/ EA Application) which is good for a control site. The tributaries along the eastern shore of Tatelkuz Lake are primarily first order streams without headwater lakes, that are not good control site matches for Davidson Creek.		LDN/UFN	Palmer					TD, Oct 24	Ready for Publishing
2141	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Clarification	No	Locations listed in Table 4.8-7 does not match Figure 4.2-1 (pg 4-9). Figure 4.2-1 shows Rainbow Trout monitoring at FC:01 and 705-10, which is not listed in the Table.	Thank you for noticing this discrepancy. In response to several comments from BC ENV in Round 1 and Round 2, some modifications to the AEMP were proposed. As part of Round 2 responses to BC ENV, an updated version of Table 4.2-1 (showing site locations and rationale), Table 4.2-2 (showing sites and AEMP sampling components) and Figure 4.2-1 (showing sampling locations) is provided in the memo attachment titled "R2_ENV_Comment ID 58 and 64".		LDN/UFN	ERM		Tonia		Ready for Submission	RT; Aug. 7	Ready for Publishing

2142	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	If conditions allow, consider adding redd surveys after the Rainbow spawning period to collect data on spawning habitat similar to kokanee. Please provide amendments to Rainbow spawning surveys in a memo.	Similar to IR 2138, collection of the suggested detailed redd data would be highly variability temporally and spatially, would not be effective, and is not necessary because long-term monitoring will determine whether any deviation from current optimal spawning locations or distribution is occurring, likely to sub-optimal habitat, during the planned Instream Flow Needs (IFN) flow regime.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2142	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		25-Aug-22	2	Follow up	Comment	No	The reviewer maintains that some measure of spawning habitat quality should be measured. In the event that spawning locations change due to changes in habitat, there needs to be baseline data to compare against in order to understand how and where the habitat changed. Perhaps it does not need to occur at the redds. An easier alternative would be to measure bed substrate size at set transects along study creeks to capture annual changes and within-creek variability. This would only have to happen once a year, and would satisfy both kokanee and rainbow trout spawning habitat monitoring.	See response to IR 2138		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2143	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Question	No	For Rainbow Trout spawner surveys, how long will daily hoop checks go on for? Will it be comparable to the kokanee surveys - over a 4 week period?	Yes, the hoop net survey period is late May to Late June with daily checks. So, the period is approximately 4 weeks.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2144	Appendix 7-A, Section 4		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	It is recommended that monitoring of bed substrate size distribution, including % fines be conducted at set transects along creeks impacted by flow reduction. Sedimentation, particularly at spawning areas is a real concern given reduction of freshet flushing flows and upstream construction works. Please provide plans for substrate sampling in a memo.	The Instream Flow Needs (IFN) flow regime has been designed to include flushing flows in Davidson Creek during freshet periods. This flow period coincides with the typical freshet period observed at the site and has been calculated to entrain and remove fine sediments which have accumulated along the bed of the stream during low flows and to 'clean' gravels that may offer spawning habitat. Sections 3.6.3 and 4.1.2 of the IFN memo provides more detail on flushing flows and discharge calculations (Blackwater Fisheries Offsetting Plan - Instream Flow Needs for Davidson Creek, Palmer, 2021). In addition, sediments in Davidson Creek are dominated by large particles (gravel and sand >63 µm), with only small proportions of silt and clay (ERM 2017, Blackwater Gold 2017 Cumulative Aquatic Resources Baseline Report). Sedimentation in Davidson Creek will be controlled using four sediment control ponds, at the TSF, Downstream Aggregate Borrow Area, Camp Site, and the Plant Site (Section 5.9.2). These ponds will mitigate a potential increase in sedimentation due to lower flushing stream flows by removing sediment from the water flowing to the FWSS. Construction sedimentation will be mitigated using the Surface Erosion Prevention and Sediment Control Plan (Appendix 9-A).		LDN/UFN	Palmer	ERM			Ready for Submission	TD; Aug. 12	Ready for Publishing
2144	Appendix 7-A, Section 4		LDN/UFN Brenley Yuan		25-Aug-22	2	Follow up		No	The reviewer accepts that the IFN was designed with the purpose of flushing fine sediments from spawning gravels. However, there is inherent uncertainty in modeling, and predicted results do not always align with real-life effects. Therefore, modeling predictions need to be ground-truthed, at least during construction and early operation. Lower Davidson Creek has been identified as important Kokanee spawning habitat and it is important to closely monitor this. At the very least, substrate size and % fines should be monitored for 10 years. This timeframe reflects the time it takes for creeks to adjust to new flow regimes. Furthermore, substrate size monitoring supports the spawning survey program as mentioned in above comments 2137, 2138, 2142.	See response to IR 2138		LDN/UFN	Palmer	ERM			Ready for Submission	TD, Sept 19	Ready for Publishing
2145	Appendix 7-A, Table 5-2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Question	No	What is the current state of riparian vegetation in lower Davidson Creek and lower Creek 661? Have you considered improving riparian vegetation cover as a possible mitigation method for increased stream temperatures?	Stream temperatures are expected to remain very similar to baseline conditions during all phases of the Project. Updated temperature modelling conducted by Knight Piesold (Davidson Creek Temperature Modelling Results, report in development, Knight Piesold, 2022) indicates that the FWSS will be able to closely replicate the baseline temperature regime under a wide variety of scenarios. Further discussion is provided in the attached memo Palmer 2022, Response to Information Requests #48 and #50 Comparison of Temperature in Davidson Creek with BCWQG (see attached "R2_LDN_UFN_Comment ID 2114 and 2145.pdf"). As such, no alteration of riparian vegetation is needed as a mitigation measure.		LDN/UFN	Palmer				Ready for Submission	TD; Aug. 12	Ready for Publishing
2145	Appendix 7-A, Table 5-2		LDN/UFN Brenley Yuan		25-Aug-22	2	Follow up	Question	No	Thank you for your response. Please provide the updated temperature modelling report when available. The reviewer has 3 follow up questions: 1) The memo you provided modelled past temperatures. Were future climate change scenarios modelled in the updated Knight Piesold report? 2) Changes within even 1 or 2 degrees during incubation can affect emergence timing. What are the expected shifts in emergence timing of Kokanee and Rainbow trout? The memo indicates that most temperature deviations occur during freshet months of May-July, which coincides with Rainbow incubation. Emergence timing has evolved over millenia to coincide with specific physical/biological conditions (e.g. optimal temperatures, optimal flows, high food availability). 3) Can you explain what is happening with the annual pattern where deviations swing from positive to negative?	1) The updated temperature modelling conducted by Knight Piesold (Davidson Creek Temperature Modelling Results, report in development, Knight Piesold, 2022) does not currently model future climate change scenarios. BW Gold is open to discussing the inclusion of such forward-looking models with LDN/UFN. 2) According to Sections 4.1 to 4.3 of the memo provided (Palmer 2022, Response to Information Requests #48 and #50 Comparison of Temperature in Davidson Creek with BCWQG), the daily mean temperature deviation data from the original water temperture model (Knight Piesold 2016, Blackwater Gold Project: Water Temperature Modelling of Davidson Creek) indicate that the temperature deviation is within the recommended range of ±1°C for 93 to 99% of the time in all three scenarios. As the reviewer notes, the few days of increased temperatures are predicted to occur during Rainbow Trout incubation. This temperature variation is within the current natural seasonal temperature variation range for Davison Creek during Rainbow Trout incubation (5 to 14C range; Figure 2), and is not expected to significantly affect emergence timing of Kokanee or Rainbow Trout. 3) The temperature fluctuations above and below modelled values for two of the three scenarios (i.e., pipeline only; FWR bottom intake only- reservoir full') occur due to temperature differences in Tatelkuz Lake and the FW, respectively, compared to Davidson Creek (i.e., warmer in early spring, colder in late summer). There is very little difference (1%) during the IFN only scenario because flow requirements are met without additional flow.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2145	Appendix 7-A, Table 5-2		LDN/UFN Brenley Yuan		06-Oct-22	3	Follow up	Question	No	Thanks for your response. Is it too late to incorporate climate change modeling into the current report by Knight Piesold? The reviewer understands that high water temperature is generally not a major concern at the mine site, but it would give the Nations greater comfort seeing data from forward-looking models, as this would be the data that is relevant to fish and other aquatic resources.	BW Gold suggests that the initial results of the temperature modelling be issued as they have been developed, with the 40-year daily record used as the underlying data set. A climate change sensitivity for the temperature modelling will be conducted as an additional modelling exercise to address this request for a forward-looking model. The timing of when this sensitivity analysis is developed can be discussed and agreed-to with the Nations.		LDN/UFN	Palmer					TD, Oct 24	Ready for Publishing
2145	Appendix 7-A, Table 5-2		LDN/UFN Brenley Yuan		17-Nov-22	4	Follow up	Question	No	Please provide timelines for the new model with climate change sensitivity exercise. Why was a new model needed? Can we expect significant changes to temperature modeling results? How urgently we need to see this will depend on the response.	Results of the final temperature modelling work are expected to be able to review in January 2023. Results of the climate change sensitivity will follow in Q1. BW Gold is not expecting significant changes to the results. The updated modelling is required to • match the revised mine development sequence (phases), • incorporate updated site baseline data, and • review temperature on a more refined timescale The Climate Change Scenario will use Representative Concentration Pathway (RCP) 4.5 to update the modelling runs for projected increases in temperatures and modified flows.		LDN/UFN	Palmer					RT; nov 30	Ready for Publishing
2146	Appendix 7-A, Table 5-2		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	In a recent stream temperature study I was involved in, flow releases from an upstream reservoir was not effective at lowering water temperatures because the source water temperatures were equally warm. Alternative mitigation strategies are needed in the event that flow release from the FWR does not result in a temperature decrease. Please include additional mitigation strategies in a memo.	As described in Table 5-2, the main mechanism for lowering water temperatures in Davidson Creek is by adjusting water controls in the FWR and FWSS water control structures. These water control structures will have robust temperature control abilities, within the limits of natural water temperature variations due to existing climate conditions (Section 6.3.4.4). The main water temperature control is using deeper, cooler water in the FWR and/or in Tatelkuz Lake via the FWSS. The streamflow regime will meet a defined temperature and instream flow needs schedule. There are no additional mitigation measures available for controling water temperatures in Davidson Creek.		LDN/UFN	Palmer	KP			Ready for Submission	TD; Aug. 12	Ready for Publishing

2147	Appendix 7-A, Section 6		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Information requirement	No	Management responses noted in this section focus mainly on further monitoring but lack concrete remedial action. Are there concrete plans for remedial action should a "high" level action response be triggered? This is of high importance should be well-researched prior to construction/operation phases. Please provide concrete remedial plans in a memo.	A memo is not required because no changes will be made to the Aquatic Effects Monitoring Program (AEMP) Plan (Appendix 7-A) in response to the comment. BW Gold understands that a formal Trigger Reponse Plan (TRP) is likely to be required as an EMA effluent discharge permit condition, which would be developed, reviewed, and approved after issuance of a permit (see comment ID# 56). The TRP would detail specific metrics and specific actions to be taken in the event of exceedance of a trigger level, which are often associated with discharge limits defined in the EMA permit. This TRP would be developed following new guidance on Trigger Response Plans from BC ENV issued in March 2022 (see Technical Guidance 12 issued June 2022 here: https://www2.gov.bc.ca/gov/content/environment/waste-management/industrial-waste/mining-smelting/guidance-documents). An adaptive management plan provides a framework for defining follow up actions or responses when a trigger is met. It is not possible to define in advance all potential management actions or responses for all effects that could potentially occur in all media or aquatic biota from all potential causes. Instead, the adaptive management framework (Section 6 of the AEMP) provides specific triggers and action levels that will identify when additional actions or responses are required beyond the routine monitoring included in the AEMP. As identified in each of Tables 6.2-1 to 6.2-5, one of the first actions at the low, medium, or high action levels is to identify the potential causes of changes so that targeted mitigation measures can be identified for implementation if needed (at the low action level) or implemented (at the medium or high action level). This framework allows the early identification of potential effects, identification of the specific cause(s) of the effects, and modifications of existing mitigation measures or implementaion of new mitigation measures to address the specific causes before adverse effects occur in the aquatic environment. BC ENV has recently issued guidance regarding adaptive management plans (see Technical Guidance 20 issued June 2022 here: https://www2.gov.bc.ca/gov/content/environment/waste-management/industrial-waste/mining-smelting/guidance-documents).		LDN/UFN	Entia	ERM	Lesley/Tona		Ready for Submission	RT; Aug. 7	Ready for Publishing
2148	Appendix 7-A, Section 7		LDN/UFN Brenley Yuan		Jul 27, 2022	1	New	Comment	No	With each annual report that is submitted, it may be helpful that a presentation in layperson language be provided to the Nations and their technical advisors.	Thank you for the input and BW Gold will make note of this request. As indicated in Section 7.2.4 of the Aquatic Effects Monitoring Program (AEMP) Plan (Appendix 7-A), a plain language report will be prepared as part of each annual report. In addition, BW Gold is committed to consulting and collaborating with Indigenous nations to determine the communication method or approach that works best to disseminate the results of the AEMP. BW Gold notes also that there are information sharing provisions within its agreement with LDN and UFN which may provide approproate commnuication means for the stated purpose.		LDN/UFN	Entia	ERM	Lesley/Tona		Ready for Submission	RT; Aug. 7	Ready for Publishing
2149	Invasive Plant Management Plan Appendix B		LDN/UFN Danny Smart		Jul 27, 2022	1	New	Comment	No	(Comment was not captured in this master ITT) Has two factsheets for two different species. Meadow salisify was not included in the baseline summary section. Adjust language if it was recorded or remove from appendices.	BW Gold confirms meadow salsify was not observed during field baseline surveys therefore Appendix B will be revised to only include Yellow salsify (*Tragopogon dubius*) in the next iteration of the Vegetation Management Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Valerie/Toni a		Ready for Submission	RT; Aug. 10	Ready for Publishing
2150	Waste Management Plan 4.4		LDN/UFN (Mikayla Davis)		Jul 27, 2022	1		comment	No	(Comment was not captured in this master ITT) Guidelines are cited but not specified if or how they will be implemented. Please provide details as to the guidelines and best management strategies that will be applied to this project.	The guidance and best management practices documents listed in Section 4.4 of the Waste (Refuse and Emissions) Management Plan (WMP) were used to develop the guidance for the Project's waste management approach provided in Section 7 of the WMP as well as the appropriate disposal methods for industrial and domestic waste described in Section 8 of the WMP. In addition the documents can be used by employees/contractors as reference documents for additional guidance/recommendations.		LDN/UFN	ERM		Tonia/Mark		Ready for Submission	RT; Aug. 10	Ready for Publishing
2151	Waste Management Plan 4.4		LDN/UFN (Mikayla Davis)		Jul 27, 2022	1	New	comment	No	(Comment was not captured in this master ITT) While this addition is helpful, the 3 guideline documents listed are not cited throughout the plan-they are only mentioned under section 4.4 and in the references section. Since these documents are guiding management practices used, they should have in text references where they have been incorporated.	Reference to the guidance and best management practices documents listed in Section 4.4 of the Waste (Refuse and Emissions) Management Plan will be provided where applicable in Sections 7 and 8 in the next iteration of the Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Mark		Ready for Submission	RT; Aug. 10	Ready for Publishing

2152	Old Growth Management SOP	Old Growth Baseline Mapping	LDN/UFN (Christina Delaney)		Jul 27, 2022	1	New	comment	No	"The EM and CM will review baseline old growth forest mapping relative to the proposed clearing footprint". How did the baseline mapping methodolgy differientiate between "old growth" and other forest age classes and/or types? Where are these baseline maps found? How often and under what circumstances are these baseline maps updated? Include a reference to where to refer to those maps, or include the maps as an appendix to this SOP.	Baseline mapping of old growth forests was completed in 2013 (see Figure 3.2-3 in Appendix 2-Q of the Application) and will be provided in the revised Old Growth Management Standard Operating Procedure. It is not expected that the baseline maps will be updated prior to construction within the permitted mine site area (i.e., Certified Project Description boundary). Section 2.2.5.2 of Appendix 2-Q of the Application details the methodology for differentiating old growth forests within the mine site boundary: The age of old growth forests varies from one Biogeoclimatic (BGC) unit to another. Forests that occur in areas where stand-initiating events are frequent have shorter intervals since their last disturbance, and old growth forests in these areas are generally older than 140 years (i.e., BGC unit SBSdk, SBSdw3, SBSmc2, and SBSmc3). The time since last disturbance in stands with infrequent stand-initiating events is greater, and old growth forests in these areas are generally older than 250 years old (BGC unit ESSFmv1, and ESSFmv1p). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Valerie		Ready for Submission	RT; Aug. 11	Ready for Publishing
2153	Old Growth Management SOP		LDN/UFN (Christina Delaney)		Jul 27, 2022	1	new	comment	No	"The CM will identify potential opportunities to limit the cleared footprint within old growth forest, pending operational requirements" - Describe how or what the opportunities are that could allow for this or what operational requirements may limit this.	Operational requirements that may limit the cleared footprint within an old growth forest include when access to infrastructure allows for reduced areas of the cleared footprint (i.e., it will be safe for infrastructure to be adjacent to a forest). The size of safety buffers between forest and infrastructure will also be considered. The cleared footprint cannot be reduced if the old growth forest is adjacent to excavations or persistant heavy equipement use (i.e., site roads).		LDN/UFN	ERM		Tonia/Valerie		Ready for Submission	RT; Aug. 10	Ready for Publishing
2154	Old Growth Management SOP		LDN/UFN (Christina Delaney)		Jul 27, 2022	1	new	comment	No	"Site drainage will also be evaluated during this review, with the intent that temporary and final site drainage not discharge to undisturbed old growth forest to the extent feasible." - Add detail and standards to ensure that if there is a case in which the site drainage is toward undisturbed old growth forest, that extra measures will be taken to prevent erosion, such as installing mitigation features or doing an assessment to determine if such drainage poses a threat to the intact old growth ecosystem.	See response to comment #1961 where the statement will be revised to indicate there will be evaluation of the drainage. The statement in the Old Growth Management Standard Operating Procedure will be further revised as follows: "Site drainage will also be evaluated during this review to avoid, minimize or mitigate potential changes to hydrology within old growth areas including erosion and sedimentation control" BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		LDN/UFN	ERM		Tonia/Valerie		Ready for Submission	RT; Aug. 10	Ready for Publishing
2155	All SOPs		LDN/UFN (Christina Delaney)		Jul 27, 2022	1	new	comment	No	No author names or signatures at end of document. Who wrote each SOP and what are their qualifications for the respective subject matters?	The standard operating procedures (SOPs) provided in Appendix A of the Vegetation Managment Plan (Appendix 9-F), Appendix D and H of the Invasive Plant Management Plan (Appendix 9-G) , and Appendices A to F of the Metal Leaching and Acid Rock Drainage Management Plan were provided as draft documents. The draft SOP documents have been written or reviewed by the qualified professionals (QP) responsible for the various plans (e.g., soil and vegetation metal sampling SOPs by the QP for the Country Foods Monitoring Plan) under which the SOPs will be used. The SOPs will be used to direct sampling or specific activities under the relevant management plans provided in the Application. The SOPs will be adopted as a reference in the applicable monitoring and management plans, and therefore the implementation of the SOP will fall under the purview of the QP for the monitoring and management plans. The QPs for each monitoring or management plan are also responsible for updating the SOPs to be consistent with current standards, new information, conditions, methods, and best management practices. Therefore, as the SOP documents are updated (including following the Application review period), they will be reviewed by the Environmental Manager and approved by the Mine Manager, as indicated in the "Review and Approval" section at the end of each SOP document. The qualifications of the Environmental Manager and Mine Manager will depend on who ultimately holds these positions with BW Gold throughout the mine life.		LDN/UFN	Entia	ERM	Lesley		Ready for Submission	RT; Aug. 7	Ready for Publishing
2156	Geotechnical	Camp Site SCP	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	The document, "Issue Tracking Table ID 371 – Camp Site Water Management and Geotechnical Design," provides the analyses and design for the Camp Site Sediment Control Pond. Section 3.5.6 of the JAIR requires "…an assessment of geohazards that could influence the water management structures and an explanation of how geohazards are managed in the design…" Reviewers were unable to locate this information within the Application. Provide an assessment of geohazards that could influence the Camp Site Sediment Control Pond and an explanation of how geohazards are managed in the design if required.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing
2156	Geotechnical	Camp Site SCP	EMLI (Sarah M. Alexis M)		Aug 25, 2022	2	New	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 371 2156 2157.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 31	Ready for Publishing
2157	Geotechnical	Camp Site SCP	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	Section 7.5 of the document, "Issue Tracking Table ID 371 – Camp Site Water Management and Geotechnical Design," states, "A layout plan showing the pond arrangement and the section used for stability analyses is included as Figure 6.1." Figure 7.1 provides a section line, which is oblique to the upper cut-slope of the sediment control pond basin. Clarify if the section line shown on Figure 7.1 is the section line used for analysis and demonstrate that the section analyzed is the critical section of analysis of the facility.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing
2157	Geotechnical	Camp Site SCP	EMLI (Sarah M. Alexis M)		Aug 25, 2022	1	New	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 371 2156 2157.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 31	Ready for Publishing
2158	Geotechnical	Water Management Pond	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Potential Permit Condition	Yes	Section 3.3.6 of the Application states 'One amendment to the Mines Act permit is anticipated for the relocated Water Management Pond (MWP), which is expected to occur by approximately Year 10 of the Operations phase.' The relocated WMP will be excluded from the permit and an application for the relocated WMP will be required to be submitted for approval.	BW Gold acknowledges this potential permit condition.		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
2159	Geotechnical	Water Management Pond	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Clarification	No	What is the flow depth at the WMP spillway invert during the design event? It's noted that the WMP spillway cross section (Section 1 on C1134 in Appendix D, Appendix 3-J) indicates riprap at the channel bottom is above the dam crest elevation, and the minimum channel containment is ~1 m above the dam crest elevation. Please clarify that the design flow depth, including freeboard, is designed be contained within the spillway channel.	The spillway invert is 1323.75 and the peak flow elevation during the design storm event is 1324.49 (depth of 0.74 m). This results in a freeboard of 0.51 m, which is greater than the minimum freeboard of 0.5 m. The elevation shown in Section 1 on drawing C1134 was incorrect and will be revised for the issued-for-construction design drawings. The spillway invert never exceeds 1323.75 m.		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
2160	Geotechnical	Water Management Pond	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	The Northern Water Transfer Pond is an unlined water dam structure proposed to be constructed with 'Zone C' material. How has the potential for internal erosion been assessed for the unlined water ponds? Please refer to ITT ID #241 if applicable.	Please see attachment "R2_EMLI Geotech Comment ID 2160.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	TD, Aug 16	Ready for Publishing
2160	Geotechnical	Water Management Pond	EMLI (Sarah M. Alexis M)		Sep 08, 2022	2	Follow Up	QP Response Required	No	The proponent response provided states, "The Northern Water Transfer Pond was previously specified as an earthfill structure with a homogeneous cross section of Zone C material… the fill specifications for this structure will be refined to use Zone S material (seal zone) for the Issued for Construction (IFC) design…The IFC design may also incorporate a toe drain as additional internal erosion mitigation at the discretion of the design engineer." It is expected that the designs of dams within the Mines Act Permit Application and supplementary documentation are complete. Submit the revised design reports and drawings for the Northern Water Transfer Pond.	Please see attachment "R3_EMLI Geotech Comment IDs 241 2160.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	KP, Sep 20	Ready for Publishing
2161	Geotechnical	Water Balance	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Clarification	No	Section 5.3.5.3 states 'wetter than average climate conditions occurring in Years 7 through 10 of operations could require a different water management strategy than represented in the model to maintain normal operating pond volume (the nominal design volume combined with the seasonal inflow allowance). Strategies to manage TSF C pond volumes could include increased water treatment (i.e., treatment at a higher rate and/or during more months in a year) and pre-emptively drawing down the WMP…' Are these (and other?) mitigation strategies and contingencies included in the Application to allow for implementation without requiring further authorizations? For example, is water treatment at a higher rate and/or during more months of the year included in the Application?	These and other mitigation strategies are included in the Application to assess the ability to maintain water balance conditions within a target operating range for a variety of climatic conditions. The reviewer is referred to "R1_CSFN Comment IDs 531-536 538 539 543.pdf" for documentation on water balance modelling that includes an extreme wet year sensitivity scenario assessed in response to comments from CSFN. Mitigations explicitly assessed include having operational water treatment at the Membrane WTP available for 12 months of the year and temporarily holding water in TSF D within available design contingency storage rather than transferring it to TSF C. Development of the extreme wet year sensitivity is discussed in Section 3.0 and the assessed mitigations are discussed in response to Comment 534.		EMLI	KP		Cindy	AT/KP	Ready for Submission	KP, Aug 15	Ready for Publishing

2162	Geotechnical	Water Balance	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	Section 5.3.8.3 states 'The results of the seepage analysis suggest sand and gravel units inferred to be buried glaciofluvial channels beneath TSF C and TSF D, are potential pathways for conveying seepage; however, the extent and continuity of these inferred deposits remain uncertain. Additional work is warranted to investigate the subsurface geology and extent of potential permeable pathways that have been interpreted in the characterization and modelling work.' Do the sensitivity analyses completed reasonably account for the uncertainty in the extent and continuity of these glaciofluvial channels in the water balance and how other areas of the mine site/subject areas will be impacted? Have reasonable worst-case scenarios, such as combined increased seepage and dry conditions, been modelled and the impacts identified? If so, what are the results? If not, why not?	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing
2162	Geotechnical	Water Balance	EMLI (Sarah M. Alexis M)		Aug 25, 2022	1	New	QP Response Required	No	Section 5.3.8.3 states 'The results of the seepage analysis suggest sand and gravel units inferred to be buried glaciofluvial channels beneath TSF C and TSF D, are potential pathways for conveying seepage; however, the extent and continuity of these inferred deposits remain uncertain. Additional work is warranted to investigate the subsurface geology and extent of potential permeable pathways that have been interpreted in the characterization and modelling work.' Do the sensitivity analyses completed reasonably account for the uncertainty in the extent and continuity of these glaciofluvial channels in the water balance and how other areas of the mine site/subject areas will be impacted? Have reasonable worst-case scenarios, such as combined increased seepage and dry conditions, been modelled and the impacts identified? If so, what are the results? If not, why not?	Please see attachment "R2_EMLI Geotech Comment ID 2162.pdf".		EMLI	KP		Cindy	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
2163	Geotechnical	Water Balance	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Information Requirement	No	The document, "Blackwater project Updated Water Balance Modelling Comment IDs 102 126 415 490 586 607 610 1263 1320 1615 1853" includes the document, "Blackwater Gold Project –Updated Water Balance Modelling in Support of Closure/Post-Closure Water Quality Optimization," prepared by Knight Piesold, dated June 29, 2022. This document states, "A berm located along the southern extent of TSF C at the former location of the WMP diverts non-contact water around the TSF and into the TSF Closure Spillway in Post-Closure." Reviewers were unable to locate a design for this berm within the Application. Please advise reviewers where this design can be found within the application or provide a design for the referenced berm.	A design for the closure spillway and the associated berm discussed in the comment were not developed as part of the Application as previously indicated in the response to EMLI Geotechnical Comment ID #310. The water balance and water quality models conceptually incorporate this berm as a water quality mitigation consistent. Design effort was focused on emergency spillways and water management features that are required as part of the initial construction activities. The location and conceptual alignment of the closure spillways from the TSF and this water diversion berm for closure are shown on Figure A.2 of the document referenced by the reviewer. When the project moves towards the end of the Operations phase and the actual final embankment elevations are determined, the design of any diversion berms and closure spillways will be developed as a part of the final Reclamation and Closure Plan (RCP).		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
2164	Geotechnical	Water Management Plan	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Information Requirement	No	Section 7.2.8 of Appendix 9-E provides a list of sediment control ponds included in the Mine Site Water and Discharge Monitoring and Management Plan. Reviewers were unable to find reference to the topsoil stockpile sediment control ponds within the document. How are the topsoil stockpile sediment control ponds and the associated collection channels incorporated into the Mine Site Water and Discharge Monitoring and Management Plan?	The topsoil stockpile SCPs and collection channels have been incorporated into the Surface Erosion Prevention and Sediment Control Plan (Appendix 9-A of the Application) rather than the Mine Site Water and Discharge Monitoring and Management Plan, since stockpiled materials will be consistent with the naturally occurring materials present in adjacent undisturbed areas (topsoil and shallow mineral soil). The Soil Management Plan (Appendix 9-B) describes the BMPs that will be implemented for the stockpiles - the measures applicable to water management include constructing stockpiles to minimize wind and water erosion; avoiding locating stockpiles in runoff pathways to ditches or watercourses, or, if not possible, installing erosion and sediment control measures; and seeding/re-vegetating.		EMLI	KP	Lorax	Stephanie	TD	Ready for Submission	AT, Aug 15	Ready for Publishing
2165	Geotechnical	Water Management Plan	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Information Requirement	No	Section 4.0 of the Design Criteria Table in Appendix A of Appendix 3-N, indicates that the topsoil sediment pond "Culvert and spillways outlet to natural environment." During flood events, what is the anticipated impact to the discharge environment, and how will these flows be managed?	There are no anticipated impacts as water discharging from the sediment pond outlets will be controlled by erosion control outlets and conveyed as required to receiving creeks. The outlets were designed and optimized to balance the size, alignment and erosion protection to release discharge in a manner that mitigates impacts to the receiving environment. Excess energy is to be managed by adequately sized riprap (or other erosion control methods) and the spillways are to be smoothly transitioned to natural ground. If required, energy dissipating structures, such as stilling basins, will be installed at the outlet of the spillways.		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Aug 15	Ready for Publishing
2166	Geotechnical	Water Management Plan	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	Information Requirement	No	Section 3.5.2.7 of the Application states, "The crushing area will be approximately 325 m southwest of the processing facilities. The area will be approximately 140 m x 90 m (at its widest) and will be separated from the RoM pad by a 25 m mechanically stabilized earth retaining wall to the southwest." Reviewers were unable to find details regarding the analysis and design of the 25 m high retaining wall within the Application. Provide the analysis and design for the referenced retaining wall or advise where this information can be found within the application. If this hasn't yet been designed by a Professional Engineer, provide a schedule for the design and construction of the MSE wall at the crusher.	Currently a design has not been completed by a Professional Engineer. The project development schedule has the MSE wall design being completed by November 2022. Construction is scheduled to commence end of July 2023 with completion by end September 2023.		EMLI	BWG						
2166	Geotechnical	Water Management Plan	EMLI (Sarah M. Alexis M)		Aug 25, 2022	2	New	Potential Permit Condition	Yes	If permitted, submittal of detailed designs for the MSE wall is anticipated to be included as a Permit Condition. [Potential Permit Condition]	The comment is acknoweledged as a potential permit condition.. BWG anticipates having a design completed by November 2022 .		EMLI	BWG		Alastair		Ready for Submission		Ready for Publishing
2167	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	Yes	The application includes various descriptions of Zone C material proposed for embankment construction including, but not limited to, the following: •At TSF C and D: o'combination of pervious rockfill and sand and gravel from the open pit and less pervious overburden, such as glacial till.' (Section 5.5.1, Appendix 3-J; Section 6.3.5, Appendix 3-K) •At Diversion Berm and WMP o'random fill comprising specific waste rock types or select pervious overburden' (Section C1.1, Appendix 3-J) o'random fill of pervious earthfill comprising sand, gravel, cobble, and cobbles from the nearby esker borrow area.' (Sections C1.4.2 and C2.4.2, Appendix 3-J) •Zone C lower bound specifications are for maximum of 60% silt/clay and 100% coarse sand, (Drawing G0040, Appendix D, Appendix 3-J). •As per the response to comment 4 (ID #241), "the Zone S material specification meets the Zone C specification and is consistent with the gradation of locally available glacial till" oZone S has been identified as having an effective friction angle of 35°. •Zone C shear strengths were represented by the Average Leps (1970) peak shear/normal stress function for rockfill. It is EMLI's understanding that the Leps peak shear/normal stress function was developed from "tests on reasonably representative rockfill materials, including a range from gravel specimens to 8-in. rock specimens"2 a) Provide justification for the use of the Average Leps (1970) peak shear/normal function for rockfill strength for Zone C material, including consideration that Zone C material specifications allow random fill, may consist of sand and gravel material, and less pervious overburden such as glacial till, and up to 60% fines	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing
2167	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 25, 2022	2	New	QP Response Required	Yes	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
2168	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	b) Provide justification for interpreting Zone C material as "not susceptible to liquefaction" (Section 4.1.5.3 of Appendix 3-Z) in consideration of the Zone C gradation, material specifications and saturation following construction of Main Dam D.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing

2168	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 25, 2022	2	New	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
2169	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	Appendix 3-Z states that "Compacted fill materials were interpreted to be not susceptible to liquefaction for the purposes of the analyses. Site-specific behavioral characteristics will be further assessed during early mine operations phase to inform the on-going design and construction of the mine facilities." in reference to construction materials Zone S, Zone C, and Zones F and T. When will "site-specific behavioral characteristics" be assessed and integrated into the design? Is this planned for before or after start of construction? Provide justification for the schedule of this assessment.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing
2169	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 25, 2022	2	New	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
2170	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 10, 2022	1	New	QP Response Required	No	Section 4.1.3.5 of Appendix 3-Z, Section 4.1.3.5 provides a description of the development of the shear strength ratios selected for the completely weathered bedrock of 0.67 (peak/yield) and 0.22 (residual). In the stability analysis figures, there is also a minimum strength assigned to the strength function of 500 kPa (peak/yield) and 1 kPa (residual). Reviewers were unable to find a discussion regarding the development of the minimum strength presented. Provide justification for the minimum strength of 500 kPa shown on the static and pseudo-static stability analysis figures the appendices of Appendix 3-Z.	BW Gold will provide a response to the comment on the date provided to the MMO in the most recent version of the Round 2 BW workplan.		EMLI	KP		Dan	AT/KP	31-Aug	TD, Aug 16	Ready for Publishing
2170	Geotechnical	Embankment Construction Material	EMLI (Sarah M. Alexis M)		Aug 25, 2022	2	Follow Up	QP Response Required	No	Round 2b Comment provided - proponent response expected August 29-September 2	Please see attachment "R2_EMLI Geotech Comment IDs 285 316 320 2167-2170.pdf".		EMLI	KP		Dan	AT/KP	Ready for Submission	AT, Sep 2	Ready for Publishing
2171	N/A		LDN/UFN			1	New		No	Trilateral meeting to be held hosted by EMLI and the project MRC technical reviewers along with BWG, their consultants and the LDN/UFN and their consultants to discuss comments and responses	The province hosted a meeting asking BW Gold to respond to the following comments raised by LDN and UFN. The meeting agenda and BW Gold's responses are included here -> please see R2_LDN/UFN_Commentt 2171. Comments brought forward by LDN and UFN: A trilateral discussion regarding concerns and supporting questions set forth by LDN/UFN: •TSF reclamation cover system oConstructability: •Artemis have chosen a 'lower' solids content tailings disposal alternative ('lower' in comparison to other tailings solids content alternative) •How will this influence reclamation cover material placement (timing and volume)? •Artemis have assumed, in their site and landform specific water balance and water quality modelling, that the reclamation cover system on the TSF will be placed in one year •Given the TSF surface area in its entirety and the presence of 'lower' solids content tailings material, is there risk for the actual reclamation cover material placement (timing and assumed performance for the water balance and water quality modelling) to be greater than one year? oPerformance expectations in closure •Artemis' reclamation and closure plan for the TSF cover system focuses on available water holding capacity (AWHC) to meet land use capability •How do the AWHC criteria 'match' the assumed site and landform specific water balance and water quality predictions for closure? •How will the location from the beach (TSF crest) area to the planned surface pond at closure influence AWHC criteria given that the depth tot eh water table will change along such a transect? oInfluence on geotechnical stability in closure •Artemis' reclamation and closure plan for the TSF cover system focuses on AWHC to meet land use capability •How does the cover system, in closure, influence the tailings mass (TSF) pore-water pressure regime (e.g.,		LDN/UFN	BWG		TD	TD	Ready for Submission	TD, Aug 16	Ready for Publishing
2172	Appendix 5-B LOM Water Balance Model 6.3 Simulated Mine Site Water Management, Response to ID 142	Effluent	BC ENV (Anna Akkerman)		Aug 19, 2022	1	New	Information Requirement	No	To support my understanding of the flexibility of proposed water management plan, I would like further information about the range of non-contact water that could be redirected to TSF C and TSF D to support waste rock submergence during dry conditions. My understanding is that Artemis is proposing to redirect portions or the entirety of the Central and Northern Diversion System to the TSFs if the water was needed to achieve targeted waste rock submergence schedule. Section 6.3.3.1 of Appendix 5-B indicates the volume of water available to be redirected during average climate conditions. Please provide the 5th percentile annual volume that could be redirected to the TSFs, by diversion system and receiving TSF using results from the VCC model under the Base Case for the LOM. Please indicate in the response which diversion(s) were assumed to be directed to TSF D in the Upper Bound TSF Seepage Sensitivity Case (from ID 142 response). [Information Request]	Modelled flows that could be redirected to the TSFs, predicted with the base case VCC Model are as follows: •The simulated average annual flow contributing to the Northern Diversion System is 1.8 Mm3 and the 5th percentile flow is 1 Mm3/yr. Flows that bypass the Southern Collection Channel of the Northern Diversion System would flow onto to TSF C and flows that bypass the Northern Collection Channel would flow onto TSF D (Figure 3.1 of Appendix 5-B). •The simulated average annual flow contributing to the Central Diversion System once the stockpile footprints are at maximum build out is 1.1 Mm3and the 5th percentile flow is 0.4 Mm3/yr. A flow of 1.9 Mm3 is the maximum flow diverted by the Central Diversion System in early Operations when the stockpile footprints are not yet developed. Flows that bypass the Northern and Southern Collection Channels would flow onto TSF C. •In addition to flows conveyed in the Northern and Southern Diversion Systems, an average annual volume of non-contact water of 2.9 Mm3 flows in the natural drainage contributing to the WMP and the 5th percentile flow is 1.5 Mm3/yr. Although not included in the modelled water management strategy, untreated water from the open pit and the Upper and Lower Waste Stockpiles could also be directed to injection wells screened in the TSF D waste rock to maintain waste rock saturation in Closure and Post-Closure. The estimated 5th percentile flow that could be collected from each waste stockpile in Post-Closure is 0.06 Mm3/yr. Non-contact water diverted to TSF D in Closure and Post-Closure in the TSF seepage sensitivity scenario to maintain waste rock saturation and a minimum TSF D Pond volume was modelled to originate from the Northern Diversion System (100% of flows) and the WMP. The WMP was selected as a modelled source of diverted water due to the simplicity of incorporating the flow path in the model. The maximum simulated annual volume of water diverted from the WMP to TSF D is 0.6 Mm3 and the 95th and 80th percentile predicted volumes are 0.15 Mm3 and 0.03 Mm3, respectively.		BC ENV (Anna Akkerman)	KP		Cindy		Ready for Submission	AT, Aug 30	Ready for Publishing

2173	Appendix 5-B LOM Water Balance Model 4.8.7 Diversions	Effluent	BC ENV (Anna Akkerman)		Aug 19, 2022	2	1	Clarification	No	I understand that the water balance model includes assumptions of diversion ditch efficiency. a) Please confirm if my understanding is correct and complete: 20% of runoff captured by the ditching system is assumed to infiltrate and reports to the downstream TSF as seepage, while 100% of overflow of ditch diversion structure, piping and/or pumping capacity is directed to the downstream TSF. The remaining runoff is directed as described in schematics in Appendix D2. b) if some or all of these diversion systems are redirected to the TSF to saturated waste rock in the TSF while meeting other mine site water needs, will the assumed diversion ditch efficiency be 100%? I'm interested to know if the QP considers this assumption to be reasonably conservative from the perspective of PAG/NAG3 waste rock saturation. [Clarification]	a) Yes, the reviewer's understanding is correct. One clarification is that the 20% losses are assumed to consist of infiltration to the channel and/or overflow from the water transfer ponds, rather than solely infiltration. b) Either TSF C or TSF D is located downslope of all diversion channels associated with the Northern and Central Diversion Systems and any water not diverted by an operating collection channel would contribute to the TSF. •If water from the Northern Diversion is directed to TSF D, all water contributing to the Northern Collection Channel contributes to TSF D (100% of flow from Area 1A of Figure 2.2 of Appendix 5-B). In order to direct water to TSF D, the Southern Collection Channel of the Northern Diversion System would still be operational and 80% of flows would be conveyed to the Northern Diversion structure and the 20% channel losses would contribute to TSF C (Area 1A of Figure 2.2. of Appendix 5-B). •If the Northern and Southern Collection Channels of the Central Diversion System are operational, 80% of the flow is directed to the Central Diversion Transfer Pond and the 20% channel losses contribute to TSF C. If the channels are not operational (such as during Closure), 100% of the water is modelled to contribute to TSF C. The ditch efficiency assumptions stated in Appendix 3-B, and described above for different scenarios, are considered appropriate and suitably conservative for determining the available water to meet the needs of the project, whether that be to meet water requirements within the TSF, the mill or downstream of the project infrastructure.		BC ENV (Anna Akkerman)	KP		Cindy		Ready for Submission	AT, Aug 31	Ready for Publishing
2174	Appendix 7-A AEMP Section 4.3	Effluent	BC ENV (Anna Akkerman)		Aug 19, 2022	2	Follow Up	Clarification	No	Table 4.2-3 presents sampling frequency for proposed AEMP sites. Monitoring of "Manual flow measurements" provides a frequency of "spot measurements". Is this meant to indicate that manual flow measurements at stations DC-10, CC-30 and CC-40 will occur monthly year round? [Clarification]	The frequency of spot measurements at DC-10, CC-30 and CC-40 will be the same as for the automated hydrology stations, a minimum of 5 per year, as described in Section 4.3.2.2 of the March 2022 version of the AEMP Plan.		BC ENV (Anna Akkerman)	Entia	KP			Ready for Submission	RT; Aug 31	Ready for Publishing
2175	CH5 5.9.2, Response to Round 1 Review Comments 27, 84, 85, and 99	Effluent	BC ENV (Andrew Foster)		Aug 19, 2022	2	1	Information Requirement	No	The following combines ENV hydrologist and biologist round 2b comments based on review of memo "Response to Round 1 Review Comments 27, 84, 85, and 99 dated June 30, 2022. 1. The memo provided fully mixed monthly concentrations based on the Base Case model concentrations from the Camp and Downstream Aggregate Borrow sediment control ponds (SCP); however, the memo does not provide supporting rationale for the proposed permit limits for each pond. For example, fully mixed concentrations were provided for the Camp SCP using Base Case model arsenic projections (0.023 mg/L) not the proposed permit limit (0.057 mg/L), which was based on the Upper-Case model projections. Please revise the memo to support the proposed permit limits. [Information Request] 2. Please provide the month(s) and flow/climate condition(s) associated with the predicted permit limit concentrations based on the results of the Upper Case WBWQM. Please provide this information for Camp and Downstream Aggregate Borrow SCPs. [Information Request] 3. The results of the revised memo should be discussed in detail with any uncertainties, assumptions, and potential effects to aquatic receptors outlined. The response to this comment as well as the requested effects assessment (comment 2097) of the Camp SCP discharge should provide adequate analysis to show that the proposed limits at both SCP discharges are protective of environmental receptors. [Information Request] 4. Selection of arsenic (Camp SCP) and dissolved cadmium (Downstream Aggregate Borrow SCP) are based on the highest magnitude of exceedance of their respective BC WQGs. However, it is not clear if the selection of the parameter requiring the most dilution considered elevated background concentrations. Parameters with elevated background concentrations would provide relatively less dilution capacity in the receiving environment over parameters with lower background concentrations. As the Downstream Aggregate Borrow SCP will discharge into Davidson Creek downstream of the freshwater reservoir (FWR), the FWR effluent and projected water quality at WQ28 must be considered in this assessment. Please provide supporting data and rationale to show selected parameters (i.e., Cd, As) are the limiting parameters from both an exceedance and background concentration standpoint. [Information Request] 5. If potential for aquatic effects to these tributaries cannot be ruled out as stated in the memo "Response to Round 1 Review Comments 27, 84, 85, and 99," ENV may assume the proposed permit limits are not protective; and therefore, may not recommend accepting proposed permit limits.	Please see attachment "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097.pdf" and "R2_ENV Comment ID 2175_R3_ENV Comment IDs 84, 85, 87, 2097_AppendixA.xlsx"		BC ENV (Andrew Foster)	Lorax	KP			20-Sep	GM; Sept 21	Ready for Publishing
2176	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	Did the "round 2a response to comment 35" incorporate data up to July 2022?	Yes, all baseline data up to July 2022 were used to evaluate the presence of trends for WQ3.		BC ENV (Andrew Foster)	Lorax		Georges		02-Sep	GM; Aug 30	Ready for Publishing
2177	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	In "Response to Round 2 Review Comment 34" are tables 2-1 and 2-2 reporting "95th percentile concentrations plus 20%" or "95th percentile concentrations" at individual sites (the table caption and headings don't match)? Can tables 4-1 and 4-2 in Appendix 5E be compared directly to tables 2-1 and 2-2 in "Response to Round 2 Review Comment 34"?	The tables display 95th percentile concentrations for individual stations without the additional 20%. The additional 20% background is added only to the proposed SBEBs values shown in Tables 2-1 and 2-2. For comparison tables, please see Memo "R2_ENV Comment ID 27_R3_ENV Comment ID 34(2), 34(10) and 2177.pdf"		BC ENV (Andrew Foster)	Lorax		Georges		02-Sep	GM; Sept 20	Ready for Publishing
2178	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	In "Response to Round 2 Review Comment 34" is the value for "all stations" the 95th percentile of the data from all stations (e.g., WQ3 and WQ5 for Creek 661). Then 20% was added to this value to generate the new SBEBs?	Correct, the proposed SBEBs values are based on data for all stations plus an additional 20%.		BC ENV (Andrew Foster)	Lorax		Georges		02-Sep	GM; Aug 30	Ready for Publishing
2179	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 23, 2022	1	New		No	Does the number of predicted BC WQG exceedances drop in Creek 661 for January-March (when no SBEB is proposed) with the inclusion of data up to July 2022? Was the number of predicted SBEB exceedances also reduced with the updated data and SBEB values?	Predicted BC WQG exceedances in Creek 661 during the January to March period, as presented in the Application, are driven by the March background model term (equal to 0.075 mg/L) which is above the BC long-term WQG. This value was derived by taking the average of the February (0.032 mg/L) and April (0.119 mg/L) background terms because no March data for WQ5 were available at the time of background term development. Since that time, a water quality sample was collected at WQ5 in March 2022. The D-Al concentration in this sample was 0.024 mg/L. If the WB/WQM background terms were updated to include this sample, it would be used to represent the March background term for Creek 661 nodes. Updated predicted D-Al concentrations for March at these nodes would fall below the BC WQG because, 1) the background term (0.024 mg/L) is below the BC long-term WQG, and 2) the D-Al source term for Project inputs to Creek 661 (i.e., the Plant Site and Camp Site footprints) is 0.006 mg/L (see Section 5.8 of the Application), well below the BC long-term WQG. Newly collected baseline data (up to July 2022) was incorporated into the water balance/water quality model to generate updated predictions specifically for WQ5. Screening of updated predictions against SBEB values shows a decrease in the number of exceedances, particularly during the January-March period. No other differences were observed for April-July (no exceedances) and August-December (total of 25 exceedances) when updated predictions for WQ5 were compared to the previously predicted values.		BC ENV (Andrew Foster)	Lorax		Georges		02-Sep	GM; Aug 31	Ready for Publishing

2180	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	Assuming tables 2-1 and 2-2 in "Response to Round 2 Review Comment 34" are the 95th percentile (without 20% added), the values are very similar between the original and revised calculations in Davidson Creek, which provides confidence in the SBEB data.	This comment is acknowledged.		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Aug 30	Ready for Publishing
2181	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 23, 2022	1	New		No	However, the WQ5 95th percentile value in table 2-2 of "Response to Round 2 Review Comment 34" is roughly 20% less for August 1-December 31st compared to the value calculated in table 5-2 in Appendix 5E; this provides less confidence in Creek 661 data. What caused the decrease in WQ95th percentile value (e.g., more data, more data in key months, temporal changes, etc.)? Is additional data collection needed? Would it be better to calculate Creek 661 SBEB values (e.g., WQ5) using only data from the last 3-5 years?	There is high confidence in the collected dataset and the baseline characterization of receiving aquatic environment/s. Exploration of the data for WQ5 suggests that the observed decrease in SBEB values is likely an artifact of the system's natural variability, in addition to the incorporation of recently collected baseline data (2021 and 2022 programs, as requested by ENV) (Please refer to the reply to comment 2182 for details on statistical analysis performed using WQ5 data). These two factors may have caused a slight shift in the re-calculated values compared to the previously proposed SBEBs.		BC ENV (Andrew Foster)	Lorax		Georges		02-Sep	GM; Aug 30	Ready for Publishing
2182	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	The "round 2a response to comment 35", indicates no statistically significant temporal differences for WQ3, which is partially supported by a limited shift in the 95th percentile value (assuming 20% not added) in the "Response to Round 2 Review Comment 34". Was temporal analysis completed for WQ5 and would that explain the shift in 95th percentile (assuming 20% not added) values for August 1-December 31st?	Trend analysis of D-Al concentrations in WQ5 resulted in low correlation coefficients with marginal p -values (r = -0.3; p = 0.04). This indicates that most of the observed variability of the data set is not explained by the relationship of evaluated variables (year, month). Statistical analysis for D-Al data collected in WQ5 was attempted by the use of two-way ANOVA, however, due to the significance of the interaction term, the two factors of variability (years, months) were further evaluated independently using one-way ANOVAs. Results from statistical analysis showed that D-Al concentrations in 2013 significantly differ from 2021, however, the p-value was marginal (p = 0.044). In addition, the months of May and June appeared to significantly differ from September (p = 0.001).		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Aug 30	Ready for Publishing
2183	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	In "round 2a response to comment 35" what were the p-values associated with the Spearman analysis? The p ANOVA value may indicate a lack of significance, but are the trends for WQ3 or any other stations substantial enough to impact SBEB values in the future?	Analysis of trends for WQ3 using Spearman's non-parametric correlation analysis indicated that there are no significant relationships between variables (p = 0.71). This suggests that significant long-term temporal trends in D-Al concentrations are not present in the current data set (including baseline data up to July 2022).		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Sept 14	Ready for Publishing
2184	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 23, 2022	1	New		No	The hydrograph in Figure 3-1 of Appendix 5E has the winter low flow season including December and therefore the SBEB monthly range does not fully reflect the hydrograph. However, your analysis of the aluminum data has determined December fits better with the summer/fall months for both Creek 661 and Davidson Creek. Is this correct? Is this influenced by potential outliers? ENV may recommend December is included with January-March pending analysis.	As discussed in the meeting with ENV and BW Gold on August 24, 2022, the figure referenced in Appendix 5-E is presented to generally illustrate three distinct flow periods that can be applied to Project area creeks. These three flow periods formed the basis for three distinct guideline/SBEB periods over the course of a year; however, the baseline water quality dataset presented in the Application ultimately determined the months for which data were grouped into these periods to calculate proposed SBEBs.		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Sept 1	Ready for Publishing
2185	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 23, 2022	1	New		No	ENV is considering requesting the 95th percentile calculations (+20%) be completed for WQ4 given it is located upstream of the proposed Camp Site Sediment Control Pond discharge location. Why was WQ4 excluded from the initial analysis and why would WQ3 be more representative of site conditions on Creek 146920 than WQ4? ENV has not reviewed WQ4 data.	WQ4 is located in the upper reach of the Creek 146920 catchment, adjacent to the proposed open pit, and its baseline water quality is influenced by its close proximity to the Blackwater deposit. Monthly average baseline concentrations of sulphate, dissolved (D) As, D-Cd and D-Zn, for example, are notably higher at WQ4 compared to receiving environment stations on both Creek 661 and Davidson Creek, and D-Al, T-As, D-Cd, D-Cu, T-Ag, T-Zn exceeded their corresponding BC WQGs in at least one baseline sample. Further detail can be found in the Application baseline surface water quality report (Application Appendix 2-K). For these reasons, WQ4 data was inferred to be less representative of Creek 661 receiving environment water quality at the approximate location of the proposed Camp Site SCP discharge compared to WQ3. It is noted that BW Gold is electing at this time to retract its application for an authorization to discharge from the Camp Site SCP, as discussed in a call with ENV and BW Gold on August 24, 2022. A memorandum summarizing the rationale for this decision is forthcoming.		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Sept 1	Ready for Publishing
2186	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	In round 3 ENV will likely request all aluminum SBEB data up to July 2022 (including January-March months), as well as data from WQ4.	Please refer to table R2_ENV Comment ID 2186. This file includes the D-Al baseline data for stations WQ5, WQ4, WQ3, WQ26, WQ27, WQ28 and WQ7 up to July 2022.		BC ENV (Andrew Foster)	Lorax		Georges		02-Sep	GM; Aug 30	Ready for Publishing
2187	Appendix 5E - SBEB Summary 4.1.1 - SBEB development approach	SBEB	BC ENV (Andrew Foster)		Aug 23, 2022	1	New		No	If there is a dissolved aluminum exceedance of BC WQG or SBEB where no reference sites are available (e.g., mine engulfs upstream reference site as is the case with Davidson Creek) how will BW Gold determine if the exceedance was caused by the mine? The water quality Trigger Response Plan (TRP) in the AEMP is too general to answer this question. A well-designed plan is one way to reduce or mitigate SBEB uncertainty. Otherwise, any SBEB exceedances would likely be assumed to be caused by the mine.	The Mine Site and Discharge Management and Monitoring Plan (Application Appendix 9-E) includes a comprehensive network of monitoring stations, including non-contact diversions (which will measure Al concentrations in background waters in the Project catchment that may be directed to the WMP or FWR, for example), numerous surface contact water locations, WTP effluent, and groundwater monitoring locations. The inclusion of this comprehensive network is intentional to allow for the differentiation between Project-related and non-Project related contributions to parameter loads that ultimately discharge (e.g., the FWR). A Trigger Response Plan requirement is anticipated as part of the effluent permit. It is anticipated this plan will consider steps to evaluate potential exceedances of both the WQGs and SBEBs, and identify and address potential causes.		BC ENV (Andrew Foster)	Lorax		Georges		Ready for Submission	GM; Sept 1	Ready for Publishing
2188	Appendix 7A - AEMP	Effluent	BC ENV (Andrew Foster)		Aug 25, 2022	1	New		No	1.It is my understanding that mine impacted groundwater and surface water will flow away from Lake 01538UEUT and Lake 01682LNRS. In addition, predominant wind direction is from the south and west (i.e., away from Lake 01538UEUT and Lake 01682LNRS). [Comment] 2.Given the close proximity of Lake 01538UEUT and Lake 01682LNRS to the mine site, air dispersion modelling, and predicted air deposition rates please provide rationale for why sampling sediment or water quality at Lake 01538UEUT and Lake 01682LNR is not proposed in the AEMP? Will deposition result in any significant changes to lake water quality?	1. Yes, the reviewer is correct the groundwater and surface water flow will be away from the lakes to the west of the Project. Yes, the prevailing wind direction is also away from the lakes. 2. Air quality modelling completed for the Application/EIS included prediction of Total Suspended Particles (TSP), or dustfall. The isopleth map provided in Figure 6.3-11 of Appendix 5.2.4A of the Application/EIS shows that the annual predicted TSP concentrations at Lake 15 and Lake 16 are marginally higher than background (approximately 0.5 ug/m^3 higher than the background of 18 ug/m^3). The amount of Project-related loading of POPCs that would be contributed to surface waters, even slow-flowing surface waters like the lakes, from dust deposition that is marginally higher than background is expected to be negligible. There are mitigation and management measures proposed for fugitive dust, as described in the Air Quality and Fugitive Dust Management Plan (Appendix 9-O).		BC ENV (Andrew Foster)	Entia		Ryan		Ready for Submission	RT; spt 2	Ready for Publishing

2189	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 4 - BWG must show that they have, at a minimum, applied to the EOCP to have the water treatment facility classified prior to the decision on the registration.	Section 3 mentioned "The facility classifications will be confirmed with EOCP". BWG is in the process of consulting EOCP. An applicationhas been made for the facility on Sept 9th and was acknowledged as 'commenced' by the adminstriative specialist with the EOCP on Sept 12		BC ENV (Breanne Hill)	WSP		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
2190	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 4 - The EOCP registration and operators certificates must be submitted to the director prior to operation of the water treatment facility.	The EOCP registration and operators certificates will be submitted to the director prior to operation of the facility.		BC ENV (Breanne Hill)	WSP		Travis		Ready for Submission	TD, Sept 14	Ready for Publishing
2190	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up		No	As requested in the September 9, 2022 letter please provide notification during the review process that the EOCP has been applied for	Please see attachment 'R2_ENV_Comment ID 2190 and 2191.pdf" Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Nov 14	Ready for Publishing
2191	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 5 - The maintenance requirement is not the operation and maintenance manual from the manufacturer. Instead, include the maintenance that the operators will complete to ensure that the water treatment facility is operating as required. Refer to the BC ENV guidance document.	The updated Camp Sewage Treatment and Disposal Operating Plan for the registration is included in "R3_BC ENV_Comment ID 2191.pdf". An O&M manual specific to the equipment specifications of the selected vendor/manufacturer will be submitted to ENV following the tender award for the facility.		BC ENV (Breanne Hill)	WSP		Travis		27-Sep	TD: Aug 28	Ready for Publishing
2191	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Nov 28, 2022	3	Follow Up		No	OP with commissioning and contingency plan - commissioning plan monitoring still missing. linked with Comment 2201	Section 7.5 Commissioning Monitoring Plan was updated to address the reviewer's comments. Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	BWG				Ready for submission	TD, Dec 7th	Ready for Publishing
2191	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up		Yes	After discussions with the Statutory Decision Maker it was determined that a complete Operating Plan (OP) for the Blackwater Gold Municipal Wastewater Regulation (MWR) application must be submitted, in accordance with Section 13 of the MWR, prior to a decision being made on the registration. The OP must contain all of the requirements in Section 23 which includes: •the proper operation, maintenance and monitoring of the wastewater facility, •the staff education requirements, •that the company has applied for certification of the facility, •a commissioning plan, and •a contingency plan. ENV understands that there may be changes to the plan and the certification of the treatment plant as the company completes installation and moves towards commissioning. As a condition of the registration, the director would consider allowing any proposed changes to the OP to be submitted 60 days prior to the start up of the plant. Please indicate when the revised OP for the registration will be submitted to ENV.	Please see attachment 'R2_ENV_Comment ID 2190 and 2191.pdf"		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Nov 14	Ready for Publishing
2192	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Clarification	No	Section 5.3 - Clarify the number of zones that are operational.	In total there are 6 zone on operation. The zones are grouped to two 3-zone. Each 3 zones accept effluent in rotation.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2192	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up		No	Please confirm that zone 5 is now operational. For reference, Section 8.3.1 of the Blackwater Project - Domestic Wastewater Feasibility and Pre-design Report states that there is a spring under zone 5 and it has been shut down.	As per section 2.1.6.2 of the Camp Sewage Treatment and Disposal – Operating Plan with appended O&M Manual - McCue Reference No. 173-0002 - only 5 of 6 septic field zones are operable (a groundwater spring exists under zone 5, and it has consequently been closed), a total operating drainpipe length of 1025 m still exists. The new Permanent Camp WWTP will produce a Class C effluent. At the minimum length and observed percolation rates, the field size allows for the disposal of 102.5 m3/day of Class C effluent, or an equivalent population of 452 people.		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Nov 14	Ready for Publishing
2192	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Nov 28, 2022	3	Follow Up		No	Disposal Field Zones - Section 2.2 in the OP needs to be updated - still states that they are dosing all six zones -	Sections 2.2.4 and 5.3 were updated to reflect that only 5 of the 6 zones are operational. Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Dec 7th	Ready for Publishing
2193	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 5.3 - Indicate the frequency for the monitoring of the field for evidence of abnormal settling, slumping, compaction or erosion.	This type of monitoring will be done in a yearly basis.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2194	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Clarification	No	Table 7-1 - BOD and TSS monitoring is listed as twice per month grab samples, Table 7 in the MWR indicates that for class C effluent the BOD and TSS sampling only needs to be monthly grab samples.	Updated to monthly grab samples.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2195	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 7.3 - Include monitoring frequency and parameters for receiving environment monitoring, including the proposed downgradient surface water monitoring in the unnamed creek.	Water levels in monitoring wells need to be measured quarterly. BOD and TSS also need to be tested each time the water lever is measured. Section 7.3 updated.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing

2195	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up	Information Requirement	No	Monitoring should be conducted to at least the standards recommended in the EIS. Please review field parameters in the EIS and include where appropriate. Include upgradient and downgratdient surface water monitoring parameters and frequency for the unnamed creek.	Section 7.3 of the revised Blackwater Camp Sewater Treatment and Disposal Operating Plan (November 2022 version) has been updated to incorporate the required monitoring for both groundwater and surface water, as described in the following paragraphs. As per the Western Water Associates (WWA) EIS report prepared in 2011 (provided in Appendix F of the MWR Application package), field-measured parameters in both groundwater and surface water will include pH, temperature, oxidation reduction potential (ORP), and electrical conductivity. These have been added to the parameter list shown in Table 7-3 of the revised Operating Plan (November 2022 version). Monitoring locations in surface water in the unnamed creek (Creek 146920, a tributary to Creek 661) upstream and downstream of the existing disposal area will be added to the monitoring program, as noted in Table 7-3 and Figure 7-2 of the updated Operating Plan. The surface water monitoring parameters and frequency will be twice per year including freshet (May or June) and fall low flows (September or October), which is more frequent than the annual sampling recommended by the WWA 2011 EIS report. This frequency of water quality sampling will align with the inspections of the drainage area (as described in Section 7.3 of the revised Operating Plan) that will occur in spring and fall. Analysis of water quality samples for both surface and groundwater quality will include the following parameters, as recommended in Section 8.1 of the WWA 2011 EIS report: field measured parameters (pH, temperature, ORP, and conductivity) and collection of a grab sample for laboratory analysis of alkalinity, nitrate (as N), nitrite (as N), ammonia (as N), total and dissolved phosphorus, orthophosphorus, chloride, dissolved metals, BOD, TSS, total coliform, fecal coliform, and *E. coli* . These have been added to the parameter list shown in Table 7-3 of the revised Operating Plan (November 2022 version). Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	Entia		Travis		07-Nov-22	TD, Nov 16	Ready for Publishing
2196	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Clarification	No	Section 7.3 - Does the lack of extensions in the groundwater wells impeded to the collection of groundwater?	Without extension will not impede the collection of groundwater, however extensions will be repaired or replaced and maintained as required to perform the monitoring. As long as the cap of monitoring wells are present, the caps can be removed when performing water level measuring and samples taking. The water levels in monitoring wells #1, #3 and #4 were successfully measured in August 2022. These wells do not have extensions. Section 7.3 updated.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2197	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Include monitoring for lift stations	Lift station monitoring added to section 7.4		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2198	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Comment	No	Section 7.4 - Monitoring in Section 86 of the MWR is for discharges to ground not for receiving environment monitoring.	Changed receiving environment to discharge to ground to avoid confusion.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2199	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Clarification	No	Section 7.4 - Section 87 indicates that for discharges greater than 50 m3/day that data must be submitted quarterly not semi-annually. Please update the OP.	Updated to quarterly		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2200	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 7.4 - Include the receiving environment monitoring data in the quarterly submissions	Receiving environment was updated to discharge to ground. This section states that "BWG will retain all flow and effluent quality data as identifed in Section 7.2 of this operating plan for internal use and submit quarterly to the MoE".		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2200	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up		No	Include that the receiving environment monitoring data will be in the quarterly reporting submissions	All of the monitoring completed as outlined in Section 7,2 - Effluent Quality Monitoring and Section 7.3 - Receiving Environment Monitoring of the Camp Sewage Treatment and Disposal – Operating Plan will be included in the the quarterly reporting submissions.		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Nov 14	Ready for Publishing
2200	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Nov 28, 2022	3	Follow Up		No	Information in the ITT about the receiving environment data being submitted to ENV should be included in Section 7.6 of the OP. Receiving environment monitoring data should be submitted with the quarterly reports in the quarter after the information was collected.	Section 7.6 was updated with: All of the monitoring completed as outlined in Section 7.2 - Effluent Quality Monitoring and Section 7.3 - Receiving Environment Monitoring will be included in the quarterly reporting submissions. Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Dec 7th	Ready for Publishing
2201	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 8 - Include information on the operational procedures required to commission the water treatment facility (not just a reference to the O and M manual) and the monitoring required to demonstrate that no adverse environmental impacts result from commissioning. Please note that the effluent must meet the standards outlined in the MWR prior to discharge even during commissioning. A contingency plan must be in place to prevent effluent that does not meet the standards from being discharged into the environment. A robust monitoring plan must be included that outlines, the location, frequency and parameters to be tested during the commissioning. A sample commissioning plan was submitted with the application - This sample plan could be updated and attached as an appendix to the OP. Include information on the start up of the DAF system in the commissioning plan.	The updated Camp Sewage Treatment and Disposal Operating Plan for the registration will be submitted to ENV on September 30, 2022. A Table of Concordance for the Operating Plan is included with the updated Plan. An O&M manual specific to the equipment specifications of the selected vendor/manufacturer will be submitted to ENV following the tender award for the facility.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission		Ready for Publishing

2201	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up		No	For the next iteration of the commissioning plan please ensure that a more robust monitoring program is included. Monitoring on Monday and Thursday is not enough to ensure that the WTP is working correctly. Also include whether the plant will be discharging to the field during this time.	Routine Monitoring is captured in section 7 of the Camp Sewage Treatment and Disposal – Operating Plan with appended O&M Manual - McCue Reference No. 173-0002. Further operational monitoring requirements are captured in various section of the operations and maintenancer manual.		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Nov 14	Ready for Publishing
2201	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Nov 28, 2022	3	Follow Up		No	Monitoring of the effluent must be conducted more frequently than outlined in Section 7.2 during commissioning. Include a commissioning monitoring plan that outlines, the location, frequency and parameters to be tested during the commissioning. Please Include information on the actual location that has been secured to take any effluent that does not meet the MWR standards during commissioning	Section 7.5 COMMISSIONING MONITORING PLAN was updated with the following to address the reviewer's comment: The influent and effluent quality of the treatment facility will be be tested every 7 days during plant commissioning. Samples of influent and effluent will be tested for: •5-day biological Oxygen Demand (BOD5) maximum of 45 mg/L •Total Suspended Solids maximum of 45 mg/L As per the testing methods listed in Section 5.2 Maintenance of Effluent Quality. Should effluent quality exceed the limits listed above, BW Gold will direct the effluent to the lift station and 5 septic tanks listed in Section 2.2 Treatment Process Overview. The tanks are currently requiring to be pumped out by a licenced contractor 3-5 times/ year and discharged to the Fraser Lake Municipal Sewage Facility. Receiving environment samples will also be collected during plant commissioning as well. Sampling location, frequency and tested parameters can be found in Sections 7.1 and 7.2. Please see attachment "R2-3_ENV_Comment IDs 2098, 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf"		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Dec 7th	Ready for Publishing
2202	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Clarification	No	Section 9 - Contact numbers are referenced in an above Section - please indicate the section where the emergency information is located	Updated		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2202	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Oct 04, 2022	2	Follow Up		No	Reference to the sections where the contact numbers are located is not included	Emergency contact info for the site and key contractors is listed in Section 6.0 emergency procedures of the Camp Sewage Treatment and Disposal – Operating Plan with appended O&M Manual - McCue Reference No. 173-0002. Furthermore, external reporting information is provided in Section 6.1.1 - Reportable spills and Appendix A - Spill Response and Reporting SOP		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Nov 14	Ready for Publishing
2202	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Nov 28, 2022	3	Follow Up		No	Section 9 still only states that the Emergency numbers are located in Sections above. Include that there are located in Section 6.	Updated Section 9.2.1 with: The provincial contact information (Northern Health and provincial PEP) is provided in Section 6.1. BW Gold and support contact information is provided in Section 6.0.		BC ENV (Breanne Hill)	BWG		Travis		Ready for submission	TD, Dec 7th	Ready for Publishing
2203	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Clarification	No	Section 9.3 - Clarify what lagoons are being referenced in Section 9.3	It's a typo. Corrected.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2204	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Aug 25, 2022	1	New	Information Requirement	No	Section 9 - Include the procedures for notifying a Health Officer	Health Officer contact information will be added to Section 6.		BC ENV (Breanne Hill)	WSP		Travis		Ready for submission	TD, Sept 14	Ready for Publishing
2204	Camp Sewage Treatment and Disposal Operating Plan	MWR	BC ENV (Breanne Hill)		Nov 28, 2022	2	Follow Up		No	Health officer contact information is not included in Section 6.	Health officer contact info is on Page 14 under section 6.1.1. Update to Section 6.2 with: Emergency contact info can be found in Section 6.0 Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	McCue		Travis		Ready for Submission	TD, Dec 7th	Ready for Publishing
2205	AEMP	AEMP - Kokanee fry spring escapement survey	BC ENV (Luc Turcotte)		Aug 25, 2022	1	New	Question	No	4.8.3.2 - page 4-43 paragraph 3, what is the sample size of Kokanee fry for the escapement survey per creek, or is the intent to enumerate all out-migrating fry in each creek at the monitoring locations for length and wet weight?	The method for enumerating Kokanee Fry Outmigration has been revised from the last AEMP Plan submission. Kokanee fry outmigration assessment will be completed using a sub-sampling mark-recapture method. Sampling will involve deploying fine-mesh nets of known dimensions into the channel at predetermined locations, according to the methods of Fraley and Clancey (1984). Each net will be sampled at a set interval and the fry captured will be enumerated and recorded. The duration of sampling period will be adjusted based on the numbers of fry netted and/or the amount of debris present, although it is expected to last approximately four weeks, based on literature review. Data including date, time, water depth, water temperature and weather conditions will be recorded. Sampling will be conducted once per week, between 19:00 hours and 02:00 hours as most (>90%) fry emigration occurs during this period (Manson 2005). Capture efficiency of the nets will be determined using a mark-recapture approach by marking captured fry with Bismarck Brown Y and releasing them upstream of the capture location. Recaptured marked fish will be counted and the proportion of recaptured fish will indicate the trap's effectiveness. The revised methods will be reflected in the next version of the AEMP Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups. Manson, H. 2005. Hill Creek Spawning Channel Kokanee Fry Enumeration Report – 2004. Columbia Basin Fish & Wildlife Compensation Program. Nelson, BC. November 2004. 13 pp. + 3 App. Fraley JJ, Clancey PT 1988. Downstream migration of stained kokanee fry in the Flathead River system, Montana. Northwest Science. 62(3): 111-117.		BC ENV	ERM	Entia	Tonia/Lesley		Ready for submission	RT; sept 2	Ready for Publishing

2206	AEMP	AEMP - Kokanee fry spring escapement survey	BC ENV (Luc Turcotte)		Aug 25, 2022	1	New	Clarification	No	4.8.3.3 Data Analysis - section references section 4.7.3 - Aquatic invertebrate data analysis - please check this is the correct section reference. Kokanee summer inventory monitoring program is section 4.8.2.3	The correct section reference should be to Section 4.8.2.3 (Data Analysis for Kokanee Summer Spawning Survey). The section reference will be updated in the next version of the AEMP Plan. BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV	ERM	Entia	Tonia/Lesley		Ready for submission	RT; aug 30	Ready for Publishing
2207	AEMP	AEMP - Rainbow Trout Spring Spawning survey	BC ENV (Luc Turcotte)		Aug 25, 2022	1	New	Question	No	4.8.4.2 (page 4-44) - Are the aging structures from selection of fish collected lethally (otoliths) or fish rays/scales? What is the desired sample size per stream/site?	Non-lethal collection of Rainbow Trout age structures will include scales and fin rays. Sample size will depend on the number of migrating fish captured in bi-directional hoop nets during the spawning period. In 2021 a total of 47 Rainbow Trout were captured using this method.		BC ENV	ERM	Entia	Tonia/Lesley		Ready for submission	RT; aug sept 2	Ready for Publishing
2208	AEMP	AEMP 4.4.1 - Surface Water Temperature	BC ENV (Luc Turcotte)		Aug 25, 2022	1	New	Clarification	No	Davidson Creek temperature - is the intent to manage temperature to background conditions or to optimal temperatures for Kokanee and Rainbow trout? Table 4.4-1 trends will be comparted to baseline trends, Section 4.4.1 refences DS condition 3.9 - maintain water temperature in Davidson Creek. Section 5 Trigger Action Response Plan - Table 5-2 references optimum temperatures for Rainbow Trout and Kokanee - please clarify and consider stating management intent in section 4.4.1.	Please refer to responses to comment IDs 47 to 51 from BC ENV regarding temperature, and comment IDs 52 and 56 from BC ENV regarding the trigger response. The approach for management of water temperature in Davidson Creek downstream of the Project continues to be a discussion with both federal and provincial regulators. Baseline water temperature observations are often outside of optimal temperature ranges specified in the BC water quality guideline. Discussion and follow up correspondence with representatives of BC ENV, BC EAO, and FLNRO in July 2022 indicate that their expectation is that the BC water quality guideline for temperature will not apply (in the context of Environmental Assessment Certificate Condition 26, that requires the proponent 'must ensure the Project does not cause downstream water quality to exceed BC Water Quality Guidelines, unless the Holder has developed and ENV has accepted one or more Science Based Environmental Benchmarks (SBEBs), in which case the accepted SBEB must not be exceeded). However, the federal Decision Statement (Condition 3.9) requires the proponent to maintain water temperature in Davidson Creek as predicted in the 2016 Environmental Assessment (EA), unless authorized by Fisheries and Oceans Canada. BW Gold has submitted a *Fisheries Act* Authorization Application (under review and not yet approved) to maintain water temperature in Davidson Creek relative to baseline conditions (e.g., remain within 1-2 degrees of baseline temperatures) instead of the BC water quality guideline optimum temperature ranges. The *Fisheries Act* Authorization Application is based on Project Optimizations since the EA and revised Davidson Creek water temperature predictions. Thus, the framework for trigger response or adaptive management of water temperature in Davidson Creek will be revised or refined to ensure that it aligns with requirements in the federal Decision Statement and approved *Fisheries Act* Authorization. These updates to the trigger response or adaptive management frameworks will be made in the next version of the Aquatic Effects Monitoring Program Plan (provided that the *Fisheries Act Authorization* is available at that time). BW Gold recognizes that management plans may need various updates as a result of permitting reviews. BW Gold will track all edits and discuss with EMLI and other regulators the appropriate timing to submit updated plans. As appropriate, updated plans will also be filed with other relevant regulators and Indigenous groups.		BC ENV	ERM	Entia	Tonia/Lesley		Ready for submission	RT; aug 30	ready for publishing
2209	Appendix 6 - HHRA	Required Components	CSFN (Pauline Mengote)	Lesley Shelley, Ph.D., R.PBio, Entia Environmental Consultants	Jun 28, 2022	1	New	Clarification	No	The HHRA does not include many of the required components of an HHRA as outlined in "British Columbia Guidance for Prospective Human Health Risk Assessment Version 2.0 April 2022." Clarification: Please provide rationale on why certain required components of an HHRA were not included in the Blackwater Project's HHRA document.	Note that the Human Health Risk Assessment (HHRA) provided in Appendix 6-A should be read in conjunction with the Conceptual Site Model report (Appendix 5-I). The problem formulation section presented in Section 2 of the HHRA (Appendix 6-A) is a summary of the results provided in the Conceptual Site Model report (Appendix 5-I); it is possible that some of the information that the reviewer is looking for is in the Conceptual Site Model report (Appendix 5-I). The HHRA (Appendix 6-A) was written and the Joint Application was submitted in March 2022 before version 2.0 of the "British Columbia Guidance for Prospective Human Health Risk Assessment" was issued in April 2022. However, the HHRA (Appendix 6-A) considered guidance provided in version 1.0 the British Columbia Guidance for Prospective Human Health Risk Assessment, as indicated in Section 1.2 of the HHRA. BW Gold can provide a more specific response to this comment if BW Gold understood which components of the HHRA that the reviewer believes were missing. Please provide references to the sections in the "British Columbia Guidance for Prospective Human Health Risk Assessment Version 2.0 April 2022" that the reviewer believes were not adequately addressed in the HHRA or associated Conceptual Site Model report and BW Gold can identify why information was, or was not, included.		CSFN (Pauline Mengote)					Ready for submission	RT; aug 31	ready for publishing
2210	Appendix 6 - HHRA	Use of Traditional Knowledge	CSFN (Pauline Mengote)	Lesley Shelley, Ph.D., R.PBio, Entia Environmental Consultants	Jun 28, 2022	1	New	Clarification	No	The identification of country foods consumption in a Study Area typically occurs through engagement with Indigenous groups with the use of Traditional Knowledge wherever possible. There is no reference to the engagement with Indigenous groups that have Traditional Knowledge of the area in the HHRA. It appears that the HHRA only considered berries, moose, hare, grouse, and fish with reference values for ingestion rates. Based on responses to recent comments from Northern Health, it appears some Traditional Knowledge has subsequently been obtained for the CFMP. Clarification: Has the additional information changed any of the conclusions of the Problem Formulation for the Risk Assessment?	As recommended by Health Canada (2018) guidance, representative country foods are selected for evaluation in the Human Health Risk Assessment (HHRA) as it is not possible to include all potential country foods items in the HHRA. Selection of country foods for inclusion in the HHRA considered qualitative information about the types of country foods reported to be consumed by Indigenous nations from the Application/EIS submitted in October 2015, as well as information provided in the EAO Assessment Report from May 2019. As noted in the HHRA (Appendix 6-A) country foods consumption rates and frequencies were based on those published by Chan (2011) for the top 10 food items consumed in Ecozone 5 in which the Project is located. This is because information about consumption rates of specific country foods by local communities from within the study area is not available. Traditional Knowledge on the types of country foods used was obtained during the consultation and engagement process for the Country Foods Monitoring Program (CFMP; see Section 2 of the June 2022 C.1 version of the Draft CFMP) and was included in the design of the 2021 and of future baseline and monitoring sampling plans, but did not pertain to country food consumption rates. The information provided during consultation on the CFMP did confirm that appropriate representative species were selected for inclusion as country foods in the HHRA, as most of the key species selected for the HHRA (e.g., large mammal, fish, berries) are still reported to be consumed by local communities. Text was added to the June 2022 C.1 version of the Draft CFMP in Section 6.3 to indicate that "*...any updates to the consumption pattern information compared to the data used in the Human Health Risk Assessment Update report (Entia 2022) provided by Indigenous groups after the environmental assessment will be integrated into future HHRAs* ". BW Gold remains open to the idea of determining local country foods consumption rates specific to the Local Study Area to better inform future HHRA updates. However, it is not expected that this would change the conclusion of the Problem Formulation of the HHRA, as the only changes that would occur would be in the Exposure Assesment calculations (Section 3 in the HHRA) to reflect updated consumption rates and frequencies. References: Health Canada. 2018. Guidance for Evaluating Human Health Impacts in Environmental Assessments: Country		CSFN (Pauline Mengote)					Ready for submission	RT; aug 30	ready for publishing

2211	Appendix 6 - HHRA	Dermal Contact Pathway	CSFN (Pauline Mengote)	Lesley Shelley, Ph.D., R.PBio, Entia Environmental Consultants	Jun 28, 2022	1	New	Clarification	No	Figure 2.7.1, Conceptual Site Model for Human Health of the HHRA, does not take into consideration dermal adsorption of soil, water or sediment, or ingestion of water. Clarification: As dermal exposure would be expected in the harvesting of some country foods, please provide rationale on why the dermal contact pathway was not identified in the Problem Formulation, but included in the exposure calculations.	Section 2.5 of the Human Health Risk Assessment (HHRA; Appendix 6-A) provides an overview of the exposure pathways that were identified in the Problem Formulation, which was provided in Section 2.4.4 of the Conceptual Site Model report (Appendix 5-I). The dermal contact pathway was identified as a neglible exposure pathway as per BC ENV (2017) and was, therefore, not included in the exposure calculations. Although it is possible that people could be exposed to parameters of concern (POCs) from dermal absorption of POCs in surface water, groundwater, country foods, or soil and sediment, the dermal absorption exposure pathway is negligible compared to other exposure pathways (ingestion of water and country foods, incidental ingestion of soil, inhalation), as metals are not absorbed efficiently through the skin. In addition, dermal absorption of POCs would also be short term and transient compared to exposure from other pathways, which are long term and relatively continuous (e.g., ingestion of water and country foods). The Conceptual Site Model in the HHRA (Figure 2.7-1) takes into consideration the water ingestion pathway and ingestion of drinking water (surface or groundwater) was included as an exposure route in the exposure calculations (see Section 3.3 of the HHRA in Appendix 6-A). Reference: BC ENV. 2017. Technical Guidance #7 on Contaminated Sites: Supplemental Guidance for Risk Assessments. Victoria , BC. Available online: https://www2.gov.bc.ca/assets/gov/environment/air-land-water/site-remediation/docs/technical-guidance/tg07.pdf		CSFN (Pauline Mengote)					Ready for submission	RT; aug 30	ready for publishing
2212	Appendix 7-A, Section 4.8.2.2		LDN/UFN Brenley Yuan		24-Aug-22	1	New	Comment	No	It has been indicated that a survey of the entire spawning distribution along Davidson Creek will be conducted, but Table 4.8-3 (page 4-40) in Appendix 7-A still indicates that only Reach 1 will be surveyed. Please ensure this is edited in future revisions.	Table 4.8-3 in Appendix 7-A refers only to the Kokanee spawner survey program for the AEMP. The entire spawning distribution of Kokanee along Davidson Creek will be surveyed as part of the federal Condition 3.14 long-term monitoring (Palmer 2022, Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012).		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2212	Appendix 7-A, Section 4.8.2.2		LDN/UFN Brenley Yuan		06-Oct-22	2	Follow Up	Comment	No	In future revisions of the AEMP, increased spawner survey coverage per Condition 3.14 should be mentioned to avoid confusion.	A statement will be added to the Kokanee spawner survey program in the AEMP explaining that the entire spawning distribution of Kokanee along Davidson Creek will be surveyed as part of the federal Condition 3.14 long-term monitoring (Palmer 2022, Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012). As discussed in a recent biweekly fisheries technical meeting, revisions to the AEMP are ongoing. BW Gold proposes to expand the scope of Kokanee surveys and provide more clarity on the overlap between the AEMP and other monitoring programs, including 3.14.		LDN/UFN	Palmer	ERM and/or Palmer will add in the upcoming methods revision to the AEMP				TD, Oct 24	Ready for Publishing
2213	Appendix 7-A, Section 4.8.2.2		LDN/UFN Brenley Yuan		24-Aug-22	1	New	Comment	No	It has been noted that Kokanee spawning surveys not conducted at Creek 661 in the 2021 field season. Please confirm that this is still a monitoring site for future years as there were thousands of spawners observed in this creek during the 2011-2013 baseline studies.	A Kokanee spawning survey was performed in 2022 at station 661-20 from late July to mid-September as part of the AEMP long-term monitoring plan (Figure 4.2-1, Appendix 7-A, Aquatic Effects Monitoring Plan).		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2213	Appendix 7-A, Section 4.8.2.2		LDN/UFN Brenley Yuan		06-Oct-22	2	Follow Up	Comment	No	Was there a particular reason spawning surveys at Creek 661 were not conducted in 2021? My understanding was that these surveys would be annual.	Spawner surveys in Creek 661 are planned to occur annually from 2022 onwards. This study was not included in the 2021 AEMP scope of work, and was added for 2022.		LDN/UFN	Palmer					TD, Oct 24	Ready for Publishing
2214	Appendix 7-A, Section 4.8.4.2		LDN/UFN Brenley Yuan		25-Aug-22	1	New	Comment	No	There is no monitoring of rainbow trout in Chedakuz Creek. How will you be able to compare populations in affected creeks against the larger population trend?	The AEMP satisfies Condition 30 of the provincial Environmental Assessment CertificateTable of Conditions (EAO 2019). This condition does not require comparisons to larger populations trends. Instead, an impact-control design has been implented to compare changes in set endpoints (e.g., Rainbow Trout spawners numbers, population structure, and fish health) in impacted streams (i.e., Davidson Creek and Creek 661) to a reference stream (i.e., Turtle Creek) to determine project-related effects due to changes in surface water quality.		LDN/UFN	Palmer				Ready for Submission	TD, Sept 19	Ready for Publishing
2215	Care and Maintenance Plan - Table 6.2-1 Page 6-3		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	Please provide a quantification of what is considered as a "significant" melt event or runoff producing rainfall event.	Appendix 9-A (Surface Erosion Prevention and Sediment Control Plan), Section 5.3.3., defines a significant rainfall event as greater than or equal to the 1 in 2 year return period rainfall.		LDN/UFN (Okane_Mike O'Kane)	KP			AT/KP	Ready for Submission	KP, Sep 23	Ready for Publishing
2215	Care and Maintenance Plan - Table 6.2-1 Page 6-3		LDN/UFN (Okane_Mike O'Kane)		06-Oct-22	2	Follow Up		No	Please confirm that the required return period time frame for C&M is the sqme as for referenced section and table in the response.	Confirmed. The required return period time frame during C&M is the 1 in 2 year return period rainfall, as stated in Section 5.3.3 of Appendix 9-A, per the response to the Round 3 comment 2215.		LDN/UFN (Okane_Mike O'Kane)	KP			AT/KP	Ready for Submission	KP, Oct 19	Ready for Publishing
2216	Care and Maintenance Plan - Appendix C Page 4 of 11		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	The time to pump down TSF pond at the End of C&M before resuming operations was determined to be 1.5 years for Scenario 1 and 2 and 6-8 years for scenario 3, Was this modelling coupled with a stability analysis to determine the risk of a rapid drawdown failure of the TSF dam? These time drames may be too quick for hydrostatic pressures within the dam to drop, resulting in stability issues at the end of or during pump down. Please reference the rapid drawdown stability analysis if available.	The water balance modelling presented in the plan was not coupled with stability analyses of the dam structure and assumed phreatic conditions during the hypothetical care and maintenance (C&M) scenarios. If C&M occurs and plans are developed for a subsequent return to operations, then geotechnical assessment of implications associated with the return to operations activities (e.g. pond pump down) will be carried out while considering of the prevailing site conditions and associated plans.		LDN/UFN (Okane_Mike O'Kane)	KP			AT/KP	Ready for Submission	KP, Sep 23	Ready for Publishing
2217	Care and Maintenance Plan - Table 6.3-1 Page 6-4		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	LGO material is reactive (i.e. PAG), and will consistently experience internal oxic conditions as a result of the current LGO construction methodology (i.e. continuous re-supply of oxygen). What influence will the continued generation of internal LGO landform acidity during C&M, particularly with an extended C&M timeframe) have on water collection and treatment requirements? Has an extended C&M period been evaluated in terms of its affect on geochemical and physical weathering that will occur to the material in terms of potential adverse impacts on the plan to re-handle the LGO material to maintain mill feed throughput? Is there an opportunity to construct the LGO stockpile to minimize continous re-supply of oxygen? Is a cover system to manage water and/or oxygen required for an 'extensive' C&M period? What conditions, triggers, etc. would constitute the requirement to place a cover system on the LGO stockpile to manage water and/or oxygen?	The opportunity to leverage INAP "Building Better Mine Rock Stockpiles" was discussed with EMLI and Indigenous groups on Thursday June 17th, 2022. Several mitigation measures were discussed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. However, BW Gold will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BW Gold recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason, BW Gold has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners, to ensure capture and treatment of both surface run-off and stockpile seepage. Further, bonding for the stockpile will be provided for as part of BW Gold's RLCE. in regards to the comment on the weathered LGO as mill feed, based on all our met samples and GC results we have taken from Oxidized, Transitional and Sulphidic ore there is no indication of a change in recoveries through weathering.		LDN/UFN (Okane_Mike O'Kane)	BWG				Ready for Submission	RT; sept 20	Ready for Publishing

2217	Care and Maintenance Plan - Table 6.3-1 Page 6-4		LDN/UFN (Okane_Mike O'Kane)		06-Oct-22	2	Follow Up		No	It does not appear that a response to the round 3 comment was addresssed by BWG. Hence, the round 3 comment remains to have a follow-up Further clarification, which is in addition to the round 3 reviewer comment would be as follows: LGO material is reactive (i.e. PAG), and will consistently experience internal oxic conditions as a result of the current LGO construction methodology (i.e. continuous re-supply of oxygen). What influence will the continued generation of internal LGO landform acidity during C&M, particularly with an extended C&M timeframe) have on water collection and treatment requirements? Has an extended C&M period been evaluated in terms of its affect on geochemical and physical weathering that will occur to the material in terms of potential adverse impacts on the plan to re-handle the LGO material to maintain mill feed throughput? Is there an opportunity to construct the LGO stockpile to minimize continous re-supply of oxygen? Is a cover system to manage water and/or oxygen required for an 'extensive' C&M period? What conditions, triggers, etc. would constitute the requirement to place a cover system on the LGO stockpile to manage water and/or oxygen?	The opportunity to leverage INAP "Building Better Mine Rock Stockpiles" was discussed with EMLI and Indigenous groups on Thursday June 17th, 2022. Several mitigation measures were discussed, including building bottom up, reducing lift height and the potential for capping to prevent air ingress. The current planned build methodology for the LGO stockpile incorporates a bottom-up approach with planned lift heights of 10m. However, BW Gold will commit to building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface. In addition, BW Gold recognizes that this may not achieve the desired reductions in oxygen ingress. For this reason, BW Gold has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners, to ensure capture and treatment of both surface run-off and stockpile seepage. Further, bonding for the stockpile will be provided for as part of BW Gold's RLCE. in regards to the comment on the weathered LGO as mill feed, based on all our met samples and GC results we have taken from Oxidized, Transitional and Sulphidic ore there is no indication of a change in recoveries through weathering.		LDN/UFN (Okane_Mike O'Kane)	BWG						
2217	Care and Maintenance Plan - Table 6.3-1 Page 6-4		LDN/UFN (Okane_Mike O'Kane)		Dec 01, 2022	3	Follow Up		Yes	First, we appreciate Blackwater's response in respect to material weathering; please consider that aspect of the comment, closed. We very much appreciate Blackwater's commitment to: "…building from bottom up and lowering the lift height to 5m, utilizing mine equipment to compact the upper surface…". Given that Application documents do not include the above design facet(s) for the LGO Stockpile, we recommend that MMO consider this commitment as a condition for the permit. Furthermore, in an effort to illustrate source control and management of the re-supply of oxygen, we suggest that leading indicator 'type' monitoring be included as a condition to support permitting, in addition to the risk mitigation commitments Blackwater; specifically, internal LGO pore-gas composition and temperature monitoring.	We appreciate LDN/UFN's confirmation iof support in reagrds to BW Gold's commitments to construction of the LGO pile. BW Gold looks forward to the discussions on permit conditions. In terms of monitoring, pore gas and temperature monitoring of the LGO stockpile will be of limited value to the project. The LGO stockpile is expected to become acid generating shortly after construction and site will be prepared to deal with poor quality drainage from this facility. BW Gold has committed to implementing significant mitigation measures, including a water management system incorporating perimeter drainage and base liners, to ensure capture and treatment of both surface run-off and stockpile seepage. In this context, leading indicators (i.e., pore gas and temperature) which give advanced warning of acid generation are not considered relevant for operational site management.		LDN/UFN (Okane_Mike O'Kane)	BWG					RT; dec 7	Ready for Publishing
2218	Care and Maintenance Plan - Table 6.4-2 Page 6-9		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	Please consider whether the timeline from the EOR inspecting and reporting on the TSF facilities, and a distinction between subsequent activities being related to the choice between scenario 1 or 2, is required in the table. Regardless as to whether the beach areas are flooded, as per scenario 1, or are covered, as per scenario 2, would evaluation of tailings beach conditions not be undertaken for either scenario? For example, in the case of scenario 1, the influence of runoff from the tailongs beach area to the pond, and in the case of scenario 2, to optimize the cover system to manage uptake of oxidation products. salinity etc. to the cover system from tailings pore-water.	The monitoring structure described in Table 6.4-2 in all scenarios is generally (1) continue monitoring and surveillance activities as per the TSF OMS Manual, (2) Perform EOR initial inspection within 30 days to identify priority actions, (3) Review OMS and update if required, including monitoring frequencies within 180 days, and (4) continue annual dam safety inspections. In subsequent years, there are requirements for review/update of the OMS Manual and dam safety inspections to continue as minimum annual requirements along with other activities described in the plan. This is an appropriate structure with sufficient flexibility to accomodate either of the scenarios contemplated.		LDN/UFN (Okane_Mike O'Kane)	KP			AT/KP	Ready for Submission	KP, Sep 23	Ready for Publishing
2219	Care and Maintenance Plan - Table 6.4-2 Page 6-9		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	Within this table, and in the text supporting the statements in this table, there is no determination as to why the site would, or would not, choose scenario 1 or 2. The water volume/flow modelling and the water quality modelling provides no indicatation that there is a difference between the two scenarios. Given the modelling results reported, why would BW Gold consider scenario 2? Would BW Gold consider that scenario 2 is perhaps better presented as an evolution arising from scenario 1 through monitoring of conditions, and thus the timelines in the table should reflect such evolution, and an extended timeframe for such monitoring. In short, 90 days does not seem to be an apporpriate time frame to make a choice to implement scenario 2.	BW Gold thanks you for this comment. We agree that the timeframe suggested to select which scenario to impliment (i.e. 90 days) is a short duration to evaluate the best option for C&M. For the next update of the Care & Maintenance Plan, BW Gold will review the suggested duration and suggest a longer timeframe that would allow for appropriate evaluation of the scenarios. Conducting a risk assessment upon the decision to move into C&M would help in this decision making process, and will be added to Table 6.4-2 in the next iteration of the Plan.		LDN/UFN (Okane_Mike O'Kane)	KP	BWG		AT/KP	Ready for Submission	KP, Sep 23	Ready for Publishing
2220	Care and Maintenance Plan - Table 6.4-2 Page 6-9		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	This table does not discuss scenario 3; however, the supporting text also does not definitely eliminate scenario 3. In fact the text (page 6-19) speaks to all three scenarios being viable from a water quality perspective. This is an inconsistency that requires resolution. In short, is scenario 3 a viable scenario, or not? If not, why not? If yes, then why is not discussed in Table 6.4-2? For example, is scenario 3 not considered in the table because of the need for the dam raise discussed in the text supporting the contents of the table within the document. Is not not considered because of the volume of water required for treatment (noting that there is no material difference in water quality at the water quality modelling nodes between the three scenarios), and the volume of water needing to managed, and the associated timeframe, for start-up following C&M?	BW Gold appreciates this comment. We acknowledge that there could be clarity with respect to consideration of Scenario 3. Table 6.4-2 and the associated text about the approach of which C&M scenario is most approriate will be updated in the next iteration of the Care and Maintenance Plan.		LDN/UFN (Okane_Mike O'Kane)	KP	BWG		AT/KP	Ready for Submission	KP, Sep 23	Ready for Publishing
2221	Care and Maintenance Plan - Table 6.9-1 Page 6-17		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	As per comment above in respect of a distinction between scenarios 1 and 2; is scenario 3, rather than being distinctly different from scenarios 1 and 2, perhaps also an evolution from scenario 1, to 2, and then to scenario 3, given that the key differences between the three scenarios focus, it would appear, entirely in respect to exposure of tailings material, or not, and if not exposed, in what manner are they covered.	BW Gold thanks you for this comment. Indeed, the differnces between the scenarios (from the perspective of the tailings) start with no cover on tailings, then two approaches to cover the tailings (soil vs. water). Upon the next iteration of the Care and Maintenance Plan, opportunities to clarify these key differences will be evaluated.		LDN/UFN (Okane_Mike O'Kane)	KP			AT/KP	Ready for Submission	KP, Sep 23	Ready for Publishing
2222	Care and Maintenance Plan - Page 6-19 & 6-20		LDN/UFN (Okane_Mike O'Kane)		25-Aug-22	1	New		No	Text on these pages make the statement that: "…From a water quality perspective, the C&M modelling indicates that all scenarios would be acceptable in that the predicted water quality in the Project receiving environment is less than BC WQG for the protection of aquatic life …. primarily a result of the mitigations that are in place to manage Project-related loading to the receiving environment including the treatment of pit sump water and TSF C pond water prior to discharging to the receiving environment during a C&M period…." Given that scenario 3 involves dam raises and increased storage and/or pumping, as well as additional treatment capacity, would BW Gold consider that it is only scenarios 1 and 2 that the above statement rerpesents? And that scenario 3 more appropriately represents conditions that are described in the bullet points further down in this section, following the statement: "…The most recent C&M water modelling results would therefore be updated following the risk assessment and consider at a minimum the following topics:…"? This distinction, while at first read, might seem pedantic, is considered to be substantive, because it would likely influence financial assurance calculation associated with C&M.	The first statement cited by the reviewer is intended to apply to all three scenarios as a specific comment on the comparison of predicted water quality to corresponding environmental guidelines. However, as noted by the reviewer, there are other considerations beyond predicted water quality (e.g., dam raises) that would need to be considered in the evaluation of the feasibility of Scenario 3. The bulleted list cited by the reviewer is provided to outline potential considerations when evaluating C&M scenarios for future C&M water quality model updates, which will be completed at a minimum every 5 years while the mine is in operations. Clarification of this section will be considered for future updates of the C&M Plan.		LDN/UFN (Okane_Mike O'Kane)	Lorax	KP			Ready for Submission	GM; Sept 23	Ready for Publishing

2223	Care and Maintenance Plan	ARD Prevention	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	Tailings for the project are expected to be potentially acid generating (PAG). A key mitigation for prevention of Acid Rock Drainage (ARD) is covering old tailings with fresh tailings prior to onset of ARD. During periods of C&M, fresh tailings will not be generated and so covering old tailings with fresh tailings will not be possible. This is problematic for ARD prevention as the old tailings will remain uncovered and Acid Rock Drainage (ARD) is expected to be generated. No plan has been proposed to prevent ARD generation during C&M periods. ARD generation is prohibited by EAC Condition 33 . The Plan must provide mitigation strategies for ARD prevention prior to onset of ARD for the tailings beaches. Possible options for ARD prevention include : a) Deposition of overburden material on the tailings beach (inert material) and flooding of PAG tailings to prevent ARD (see Ascot permit requirements in Nov 2021 MA permit) b) Flooding of PAG tailings beaches and geotechnical stability assessment showing adequate safety factors are met c) Design of tailings beaches during operations that are NAG material (current understanding is that for this site this is not feasible due to limitations with desulfidization effectiveness (pers com Lorax, John Dockery) d) Ongoing "wetting" of tailings beaches with sprinklers (seems unlikely to be practical and feasible) Further work is required to determine the plan for prevention of ARD during periods of C&M. This is an essential component of the C&M plan that is lacking. Plans for Condition 33 and Condition 11 should be completed together. Source recommends collaborative development of plans for Condition 11 and Condition 33 with BW Gold and the joint technical review team. Footnote: 3 Condition 33 and the prohibition on ARD generation is highlighted in Appendix A 4 Additional mitigation strategies are welcomed	Please refer to Section 10 of the draft C&M Plan for updates made to the draft C&M Plan related to tailings and ARD.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM						Ready for Publishing
2223	Care and Maintenance Plan	ARD Prevention	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	Status: Not Addressed Please respond to the original comment. The response provided by the proponent postpones the preparation of necessary components of the CMP to the future. This would be planning to plan for a C&M period when it happens rather than having a plan prepared for a worst-case scenario C&M period that can be modified to account for the specific site conditions when entering a C&M period. This approach is not acceptable nor is it beneficial from the design and environmental perspectives. For example, based on the Application, coverage or submergence of exposed waste rock and tailings is necessary. However, the CMP does not provide the information required to assess the duration of exposure and impact on water quality during a C&M period. Instead, the CMP proposes to evaluate the need for such coverage after entering a C&M period. This exercise can be viewed as a question of not being prepared vs being prepared for the worst and adjusting later to reflect the conditions of the site during a C&M period. Source would like to better understand the comment that the site would continue to discharge water when water quality complies with the permit and the Metal and Diamond Mining Effluent Regulations (MDMER). What if the treatment plant capacity is exceeded? Assessing the risk of accumulation of stored water and the approach to responsibly managing excess water to allow return to operations	Section 6.4 (Tailings Storage Facility) has been included in the updated C&M plan to describe management of acid rock drainage (ARD) and metal leaching (ML): "The primary C&M management strategy to limit the potential for ARD and ML in TSF C during the first five years of operations generally comprises allowing water to accumulate within the TSF C supernatant pond to reach an elevation slightly above the crest elevation of the PAG/NAG3 waste rock dump thereby achieving saturation of PAG/NAG3 waste rock and providing a shallow water cover to prevent oxidation." Once the ML/ARD management strategy described in Section 6.4 is implemented, the focus of C&M water management for the TSF will shift to prevention of surplus water accumulation by limiting inflows and treatment and discharge of excess water not required for ML/ARD management. The actions during this phase of C&M are further described in Sections 6.8 and 6.9. A risk assessment (see Section 6.9) would be completed once other water management C&M activities are in progress to determine what the ML/ARD management strategies are for the remainder of the C&M period. As stated in the Section 6.9: "Management of mine site water will continue through C&M with potentially modified procedures and mitigations established through operations (see MSDP, November 2021). Preliminary triggers for additional mitigation and mine site water management and/or monitoring are provided in the MSDP and are expected to be established and updated periodically during Operations."		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM						Ready for Publishing
2223	Care and Maintenance Plan	ARD Prevention Requirement in Condition 33	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	Based on the information provided in Section 6.4 of the C&M Plan and as discussed in the previous round of comments, upon entering any C&M period at Blackwater, a large portion of the tailings remains uncovered and exposed to atmospheric conditions. As such and given the ML/ARD potential of tailings, it is necessary to identify the impact of this change in storage conditions on water quality and treatment requirements. This information is necessary to effectively mitigate and minimize negative impacts on the receiving environment. Additional work is required to determine the plan for the prevention of ARD during periods of C&M, an essential component of the C&M Plan to meet the requirements of EAC Conditions 11 and 33. BW Gold's response postpones the preparation of necessary components of C&M Plan, which would be	The revised C&M Plan (Section 6.4) provides three C&M scenarios for the management of tailings and potentially acid generating waste rock with respect to prevention of acid rock drainage through the C&M period.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM						Ready for Publishing
2223	Care and Maintenance Plan	ARD Prevention Requirement in Condition 33	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	1	New	Recommended Permit Condition	Yes	Considering the results of the additional modelling work, CSFN support limiting the quantity of water stored in the TSF to reduce geotechnical risks and facilitate speedy return to operation. This however, increases geochemical risks that can potentially lead to negative environmental effects due to the inherent uncertainty of modelling. This risk is further exacerbated by the assumptions made for derivation of the acidic tailings source term in the current C&M modelling work. The tailings source term is estimated based on the PAG rock properties and neglects the significant difference in particle size between tailings and PAG rock. This results in a gross underestimation of the contaminants loading	The model Scenario 2 presented in the Care and Maintenance Plan (C&M Plan) assumes the closure cover is soil and the availability of the volume of soil for use of the TSF cover is provided in Section 6.4 of the C&M Plan. The use of the NAG slurry cover as an alternative to or in addition to the soil cover will be discussed in the next iteration of the Care and Maintenance Plan (C&M Plan). The discussion will include both the availability of the NAG slurry and the impact to other remediation and reclamation plans. BW Gold acknowledges the proposed permit condition. Section 10.2 of the C&M Plan indicates that at a		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM				Ready for Submission	TD, Sept 27	Ready for Publishing
2224	Care and Maintenance Plan	Water Treatment Capacity Requirements	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	During operations "pore lockout", the water in tailings pores, is a significant water sink, ranging from approximately 2 to 8 Mm3/year depending on project phase and mill throughput. During a C&M period, the mill will cease operation and pore lockup will no longer be a significant sink for water. This change significantly increases the volume of surplus water requiring management at the site. During operations, the capacity of the sulphate WTP is approximately 2 Mm3/year. Section 6.7 of the CMP simply states that surplus water in TSF ponds is anticipated during a C&M period. The actions noted in Table 6.7-1 to manage water surplus are mostly monitoring activities rather than actions that would allow increase in treatment/discharge capacity. Source is concerned that the operations phase water treatment capacity is not sufficient to maintain a stable water balance during C&M. This concern needs to be addressed with water balance modelling and mitigation planning for periods of C&M.	Please refer to Table 6.8-1 of the C&M Plan, which includes actions to: -Update the mine site water balance model (WBM) and evaluate the TSF ponds for the projected fill rate and operational freeboard (to be completed in conjunction with the projected flooding schedule) within 60 days of entering a C&M phase. -Continue operation of the Membrane WTP to treat surplus water from TSF C to maintain the TSF C pond within target operating range. Effluent is discharged to the WMP. -Continue monitoring of groundwater wells, outflow monitoring stations, and water level stations levels with annual reporting to EMLI/ENV/ECCC in accordance with permit, authorization and regulation requirements. In addition Chapter 5, Section 5.6.3 and 5.6.4 of the Joint MA/EMA application includes the following that directly addresses the reviewer's comments:		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM						Ready for Publishing
2224	Care and Maintenance Plan	Water Treatment Capacity Requirements	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	Status: Not Addressed. The answer provided by the proponent referring to the MA/EMA application starts with "during the operations phase....", which is irrelevant to a C&M period. Further, the mean conditions are unlikely to exist every year. The mine has to be prepared for the full range of water quantity conditions expected (this is typically a very large range). The range changes substantially for C&M due to the lack of pore lockout as a sink in the WB. This is the key question that needs to be addressed at this time.	Section 6.4 and 6.8 of the updated C&M Plan now states that, upon entering the C&M phase, water will be managed to limit the potential for ARD and ML in the TSF. Thus, dependent on the year of entering C&M, treatment of TSF C surplus water may be limited to similar volumes modelled during operations (i.e., when there is wetter than normal years). Once the TSF has been flooded to the maximum extent, a tailings beach sampling program will be initiated to determine the ML/ARD potential of the exposed tailings. This sampling program and any further recommendations for tailings ML/ARD management will be developed by a qualified professional for geochemistry. Consolidation seepage water will also gradually be released from the tailings to the supernatant pond; however, this process of solid-liquid separation does not result in an overall stored volume change. Water levels in the TSF will be managed during C&M using the reclaim water system, operated on an as needed basis, to convey excess flows to the Membrane WTP and maintain the elevation of the TSF pond slightly above the crest elevation of the PAG/NAG3 waste rock dump, thereby maintaining saturation of PAG/NAG3 waste rock and a shallow water cover to prevent oxidation. Water treated at the Membrane WTP will continue to be discharged to the WMP. See also response to comment #28 for related information about the proposed C&M modelling scenario that was presented during meeting with Source (on behalf of the CSFN) and BW Gold (January 19, 2022).		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM						Ready for Publishing

2224	Care and Maintenance Plan	Water Treatment Capacity Requirements	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	1	New	Recommended Permit Condition	Yes	As indicated from the results of the WB/WQ modelling work, regardless of the scenario modelled, upon entering a C&M period, the project needs additional water treatment capacity. This is a critical component for the satisfactory management of site WB/WQ in periods of C&M to ensure the project meets the requirements set out in EAC Condition 33. The underestimation of the contaminants loading by the source terms used for C&M modelling, the limited availability of coverage material for the exposed tailings beaches, and the significantly higher volume of water that must be managed/treated during a C&M period increase the risk of water quality exceedances and negative environmental impacts during a C&M period for the project. Considering the extremely low capacity of the downstream environment for additional loads of contaminants, it is crucial that the necessary water treatment capacity is available as soon as possible so it can be used when needed. Therefore, it is recommended that BW Gold increase water treatment capacity of the project as soon as possible after entering a period of C&M. Recommended Permit Condition - If a period of C&M occurs, BW Gold must add the estimated additional water treatment capacity (110 L/s vs. 72 L/s during operations) within one year of entering the C&M period. Status: Not Resolved unless included as aPermit Condition	BW Gold acknowledges the comment and has identified the costs and time to construct the additional treatment facility (see Appendix F of the Care and Maintenance Plan).		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM				Ready for Submission	TD, Sept 27	Ready for Publishing
2224	Care and Maintenance Plan	Water Treatment Capacity Requirements	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	The former part of the answer provided speculates that "dependent on the year of entering C&M, treatment of TSF C surplus water MAY be limited to similar volumes modelled during operations". This does not address the concern raised by CSFN as stated in the original comment that up to 6 Mm3/year of surplus water can be available during a C&M period. What if surplus water in C&M is not limited to similar volumes predicted during operations?! If there is information to support this, please provide to justify. BW Gold must ensure sufficient treatment capacity is available upon entering a C&M period, which requires further work to model a most likely worst-case scenario for entering a C&M period. The C&M Plan must be updated upon completion of this additional and critical work so that water treatment and management strategies reflect the results of predictive modelling. Additional work is required to verify whether the operations phase water treatment capacity is sufficient to maintain a stable water balance during C&M periods. BW Gold's response is irrelevant to a C&M period. Blackwater must be prepared for the full range of water quantities expected, which is typically a substantial change for C&M periods due to the lack of pore lockout as a sink in the Water Balance (WB).	As identified in Appendix D and summarized in Section 6.8 of the revised C&M Plan there is a potential for greater water accumulation in the TSF that would require an increase in treatment rate from 72 L/S [up to 2.3 Mm3/yr] during Operations to 110 L/s [up to 3.5 Mm3/yr] during C&M. Should the Project enter C&M, a cost estimate to build and operate the upgrade membrane treatment plant capacity is provided in Appendix F of the revised C&M Plan.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM						Ready for Publishing
2225	Care and Maintenance Plan	Preparation of Mine Waste and Water Management Plan (Condition 33)	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	The CMP frequently refers to the Mine Waste and Water Management Plan (Condition 33) for guidelines or actions taken during a C&M period. This includes guidelines for monitoring water levels in the TSF, operation of the membrane water treatment plant, and updating the mine site WBM. However, BW Gold is proposing that the Plan for Condition 33 be finalized by Dec 2023, an unsupported timeline given the lack of solid rationale. Given the significance and importance of a properly prepared CMP, it is prudent to prepare the plan for Condition 33 with the CMP to include measures specifically for tailings beach management, water treatment and residue management, and return to operations after a C&M period. The CMP cannot reference a document that does not exist. Please revise the schedule for preparation of the plan for Condition 33. Note: this topic was discussed with BW Gold and this will be developed in collaboration with the technical review team with an aim to have it completed at the latest by late 2022 or January 2023 rather than Dec 2023. Footnote: 5 See Condition 33 at the end of this document	Comment acknowledged. The CMP also frequently refers to the Mine Site Water Discharge Plan (MSDP), which includes Table 11-1: Mine Site Water Adaptive Management Actions describing actions and steps to be taken to prevent impacts to water quality that could be applied during a C&M phase.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM				Ready for Submission		Ready for Publishing
2225	Care and Maintenance Plan	Preparation of Mine Waste and Water Management Plan (Condition 33)	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	Status: Not Addressed Comment not addressed. Please respond to the original comment.	As stated in the in original response, the C&M Plan also refers to the Mine Site Water Discharge Plan (MSDP) that has been drafted (Appendix 9-E of the Joint MA/EMA Permit Application). Section 10.2 of the updated C&M Plan also refers to Condition 33 (Mine Waste and Water Management Plan) completion to be developed and submitted as a draft to the parties required by the EAC Condition 33, for review a minimum of 60 days prior to the planned commencement of Construction or as listed in the Document Submission Plan required by Condition 10 of the EA Certificate.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM				Ready for Submission		Ready for Publishing
2225	Care and Maintenance Plan	Preparation of Mine Waste and Water Management Plan (Condition 33)	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	0			No	Pending review of draft MWWMP	A draft of the EAC #M19-01 Condition 33, Mine Waste and Water Management Plan was provided in April 2022 and BW Gold received comments on the plan from CFSN following a June 30 EMC meeting. BW Gold will revise the plan for submission in accordance with the Document Submission Plan.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM				Ready for Submission		Ready for Publishing
2225	Care and Maintenance Plan	Preparation of Mine Waste and Water Management Plan (Condition 33)	CSFN (F.Mohamm, R.Freed and P.Littlejohn)		14-Sep-22	1	New		No	Status: Not Resolved - Pending receipt and review of the MWWMP	On behalf of the CSFN, Source submitted comments on July 12, 2022 regarding the draft EAC #M19-01 Condition 33, Mine Waste and Water Management Plan (MWWMP April 2022). The comments and draft responses were discussed at the September 15, 2022 EMC Meeting. The final comment responses will be provided to the CSFN by September 30, 2022 and the MWWMP may be updated, dependent on the comment responses. A final MWWMP is targeted for November 2022 to incorporate any future comments through the Application review.		CSFN (F.Mohamm, R.Freed and P.Littlejohn)	ERM				Ready for Submission	TD, Sept 27	Ready for Publishing
2226	Care and Maintenance Plan		EMLI Geoscience (Gareth W.)		20-Sep-22	1	New	QP Response Required	No	Appendix F provides capital and operating cost and lead time estimates for implementing an increase in treatment capacity at the Membrane WTP at the start of the C&M period. An additional increase in WTP capacity is required to draw down the volume of water in the TSF at the end of C&M to resume operations. In the event that the mine transitions directly from C&M to permanent closure, would this increase in treatment be required? If so, please provide capital and operating cost estimates for this additional increase in WTP capacity. If not, please indicate how the additional water in the TSF would be managed.	Please see attachment "R3_EMLI_Comment ID 2226.pdf"		EMLI Geoscience (Gareth)	KP	Lorax		AT/KP	Ready for Submission	KP, Sep 30	Ready for Publishing

2226	Care and Maintenance Plan		EMLI Geoscience (Gareth W.)		11-Oct-22	2	Follow Up	Information Requirement	No	The response indicates that no additional water treatment capacity would be required to transition from the proposed C&M Scenario 2 TSF pond volume to a permanent closure volume within the proposed time frame for closure activities. However, C&M Scenario 3 is not discussed in the response. This scenario as presented in the C&M Plan involves a substantially greater volume of water in the TSF (14 Mm3 vs. 4 Mm3) and is proposed to include approximately 6 to 8 years of treatment at a rate of 165 L/s (increased from 110 L/s during C&M). In this scenario, would an increase from the 110 L/s C&M treatment rate be required to transition directly to permanent closure? If so, please provide capital and operating cost estimates for this additional increase in WTP capacity. If not, please indicate how the additional water in the TSF would be managed. [Information Requirement]	Please see attachment "R4_EMLI_Comment ID 2226.pdf"		EMLI Geoscience (Gareth)	BWG	BQE/KP				GM; Oct 27	Ready for Publishing
2227	Care and Maintenance Plan		EMLI Geoscience (Gareth W.)		20-Sep-22	1	New	Potential Permit Condition	Yes	The acidic tailings source term developed for Scenario 1 uses assumptions based on waste rock humidity cell testing that are not demonstrated to be applicable for tailings, and consequently loading rates from acidic tailings beaches may be underestimated in this scenario. EMLI is considering a permit condition requiring further geochemical testing of acidic tailings material once available, to refine this source term in future models.	This potential permit condition is acknowledged. As supporting information, we note tailings kinetic testing initiated as part of the Project baseline studies was terminated before acidic pH values were reached. To predict acidic tailings beach source terms, the neutral pH HCT results were scaled based on the difference in neutral pH and acidic pH values observed in waste rock kinetic tests. More representative model input could be generated from longer term tailings kinetic testing. Additional tailings kinetic tests could be initiated once mill tailings become available. The full scale mill will produce more representative samples (compared to lab-based metallurgical testing) in sufficient quantities to allow larger scale field based experiments. This analytical program could be incorporated into the ML/ARD Management Plan alongside the Project's other geochemical characterization requirements.		EMLI Geoscience (Gareth)	Lorax				Ready for Submission	GM; Sept 30	Ready for Publishing
2228	Care and Maintenance Plan Section 6.4		EMLI (Liz Murphy)		27-Sep-22	1	New		No	It is noted that "Scenario 2 – Closure soil cover: water covers the PAG/NAG3 waste rock stored in the TSF, and the remaining tailings beach area is covered with soil." Although not stated in the plan it is assumed re-salvage of the material would not be possible due to contamination with tailings. a.Please clarify how this scenario is expected to impact soil volumes available for final closure if the site resumes operations.	The next iteration of the Care and Maintenance (C&M) Plan will indicate that the soil cover used in scenario 2 would not be re-salvaged as a result of contamination with tailings. As identified in the Reclamation and Closure Plan (RCP) the final closure cover for TSF beaches is the use of an engineered cover however sufficient surface soil is planned to be salvaged to place a 30 cm cover of mixed-parent-material surface soil on the TSF tailings beaches, if necessary (Research trials will be conducted to refine design specifications for the cover to be placed on the TSF tailings beaches). Thus the total volume of available surface soil available for final closure is considered a conservative estimate and does not include the soil salvaged and stockpiled under the Early works permit. Section 6.4 of the C&M will be updated to include an additional task to review the salvaged soils balance prior to the end of the C&M period, this will incorporate the results of the research to address if an engineered cover will be an effective cover for the tailings TSF beaches at closure.		EMLI (Liz Murphy)	ERM				Ready for Submission	TD, Sept 30	Ready for Publishing
2228	Care and Maintenance Plan Section 6.4		EMLI (Liz Murphy)		12-Oct-22	2	Follow Up		No	Please clarify if the soil cover proposed in scenario 2 is expected to meet closure requirements if the C&M period leads to full closure. That is, will the scenario 2 soil cover be retained if C&M period leads to closure, or will an additional engineered cover be necessary and likley lead to the loss of the growth medium?	Chapter 4 - section 4.2.2 Landform design and control of the application states that 'The closure strategy for the PAG tailings includes processing NAG waste rock and OVB to create a slurry made of NAG waste rock and OVB to cover the PAG tailings. The NAG waste rock and OVB slurried cover will minimize ARD/ML from the underlying PAG tailings in the long-term.' Depending on the timing of a potential C&M period within the timing of the overall LoM and the volumes of soil available for use at the time the site entered a C&M period, a risk assessment could be carried out prior to placing a cover to determine the best path forward, whether it be soil placement or a NAG slurry. Mine development topsoil salvage (haul roads, stockpiles, pads, etc.) will exhaust the conceptual capacity of TS-2 (185k LCM), TS-3 (780k LCM), and send 80 thousand Loose Cubic Meters (k LCM) of Topsoil to TS-4B: VolumeUnitLocation 185 k LCMTS-3 780 k LCMTS-2 80 k LCMTS-4B Water Management Structures topsoil salvage will add volume to TS-4B and TS-6. The combined total volume allocated to TS-4B is 355k LCM. VolumeUnitLocation 275 k LCMTS-4B 35 k LCMTS-6 Please notes these are volumes allocated during the initial construction phase, we will certainly be adding more topsoil to the non-filled piles post gold pour.		EMLI (Liz Murphy)	BWG		Travis		Ready for Submission	TD, Oct 17	Ready for Publishing
2229	Care and Maintenance Plan Section 6.4		EMLI (Liz Murphy)		27-Sep-22	1	New		No	It is noted that "Scenario 3 option would require additional dam construction to raise the height of the dam or would need to incorporate alternative means of managing the IDF during the C&M period." a.Please estimate the time required to implement this scenario.	Each staged raise for Main Dam C in the first six years of operations was designed as an annual raise (Table 5.1 of Appendix 3-K). Assuming that the chosen scenario was to raise the embankment to achieve storage of the volume of water estimated for Scenario 3, this could be achieved within a year. It is important to note that the C&M assessment completed assumed that on-going construction of the dam was not completed during the year prior to initiating C&M. If construction did occur during this year, then the time to implement Scenario 3 may be less than one year.		EMLI (Liz Murphy)	KP			AT/KP	Ready for Submission	KP, Sep 29	Ready for Publishing
2230	Care and Maintenance Plan		EMLI (Liz Murphy)		27-Sep-22	1	New		No	In the letter from the Major Mines Office to BW Gold (dated April 11, 2022) a list of Care and Maintenance requirements in addition to those information requirements set out in Section 4.9 of the Joint Application Information Requirements were provided. The requirement 2(a) required a map(s) showing the location and extent of all site activities at the time of C&M initiation. This map was not found in the C&M Plan.	Appendix D of the revised C&M plan includes maps (Figure A.1, Figure A.2 and Figure A.3) indicating the location and extent of all site activities at the time of C&M initiation (end of Year +3) for each of the modelled C&M scenarios. The maps will be provided in the main report (Section 6) in the next iteration of the C&M plan.		EMLI (Liz Murphy)	ERM				Ready for Submission	TD, Sept 30	Ready for Publishing
2231	Ch 6 - Environmental Effect Predictions	Effluent	BC ENV (Andrew Foster)		27 Sep, 2022	1	New	Information Requirement	No	Please provide the percentage of high productivity months during operations that nutrient effect benchmarks (i.e., phosphorous background mean concentration + 50% and background trophic status) will be exceeded in Davidson Creek locations (i.e., WQ28, WQ27, WQ26, WQ7).	Please see attachment "R4_ENV_Comment ID 2231.pdf"		BC ENV (Andrew Foster)	Lorax				12-Oct	GM; Oct 11	Ready for Publishing
2232	Ch 6 - Environmental Effect Predictions	Effluent	BC ENV (Andrew Foster)		27 Sep, 2022	1	New	Information Requirement	No	1.The memo, "Responses for BC ENV Comment IDs# 72, 74, 92 (part 1 and 2)" indicated WQ7 may have existing potential nutrient enrichment due to clearing of riparian areas in 2019 for agriculture activities. Due to the sensitive environmental features (e.g., Kokanee spawning) at this location no periphyton/benthic sampling has been completed. Riparian clearing potentially lowers some physical barriers of nutrient enrichment (e.g., light availability, temperature) increasing the risk of nutrient enrichment through introduced phosphorus and nitrogen via mining or agriculture. In the effects assessment, WQ7 is the furthest downstream site expected to have phosphorous concentrations influenced by mine activities. In the memo "Responses for BC ENV Comment IDs# 72, 74, 92 (part 1 and 2)" all nodes further downstream (i.e., WQ8, WQ9, WQ13, ChedakuzMidway, and ChedakuzOutlet) indicated possible existing nutrient enrichment. The only downstream site/node with periphyton data (WQ13) indicated elevated periphyton biomass in 2011 and increased benthic invertebrate abundance in 2011/2012.	Please see attachment "R4_ENV_Comment ID 2232.pdf"		BC ENV (Andrew Foster)	ERM	Lorax			Ready for Submission	GM; Oct 17	Ready for Publishing

2233	R2_ENV_Comment IDs 36 and 88.pdf	Effluent	BC ENV (E. Rainey)		27 Sep, 2022	1	New		No	ENV understands that the proponent wishes to withdraw authorization to construct and discharge effluent from the camp site sediment control pond (SCP) as part of this EMA permit application, but proposes to maintain the camp site as an authorized component of the Mines Act permit application. There remains uncertainty regarding the water management for the camp site during construction operations assuming no discharge to the environment is proposed and/or authorized at a later date. Discharge of untreated mine contact water directly to Creek 661 via its tributaries is not recommended by ENV during operations for protection of the receiving environment. Therefore, for this application ENV requires BWG to provide information on how water will be managed at the camp site to manage runoff, sediment and erosion control during construction, as well as mine site contact water and runoff during operations that does not involve the use of a SCP discharge to Creek 661.	Site preparation and construction of the operations camp (and associated Camp Site sediment control pond [SCP])is not anticipated to occur until late 2023 or 2024. There will be no effluent or water to manage at this location prior to the construction. BW Gold ultimately intends to construct and operate the Camp Site SCP to manage water at this location. BW Gold intends to apply for an effluent discharge permit for the Camp Site SCP in early to mid-2023 once baseline data collected in 2022 are available and additional site investigation has been completed, which is expected to allow sufficient time for application review and approval prior to any need for effluent discharge. BW Gold has no intention of discharging effluent without an effluent discharge authorization.		BC ENV (Andrew Foster)	Entia				Ready for ERM review	TD, Sept 28	Ready for Publishing
2234	R2_ENV_Comment IDs 36 and 88.pdf	Effluent	BC ENV (E. Rainey)		27 Sep, 2022	1	New		No	ENV understands the water quality model has not been updated to reflect the changes to proposed effluent discharge to Creek 661 during construction and operations from the plant site and camp site SCPs. Given these changes ENV now needs to understand the relative proportion of the SCP effluent discharges during construction and operation versus the unrecoverable mine contact water seepage contributing to Creek 661, in terms of contaminant loadings. Please provide the following information: 1) A figure and/or summary table that presents the relative loadings for the plant site SCP effluent discharge, camp site SCP effluent discharge and unrecoverable seepage to Creek 661 for construction and operations that demonstrates the proportion of loadings for POCs, compared to the water quality predictions at WQ5, and	Please see attachment "R4_ENV_Comment ID 2234.pdf"		BC ENV (Andrew Foster)	Lorax				Oct. 21	GM; Oct 24	Ready for Publishing
2235	Joint MA/EMA Permits Application Section 5.8	Effluent	BC ENV (E. Rainey)		27 Sep, 2022	1	New		No	The proposed effluent permit limits for some parameters at the FWR (Table 5.8-4) and TSF Stage 1 SCP (Table 5.8-7) are listed as "BC WQG" in the tables with footnotes to indicate what the guideline is dependant on. However, for the effluent permit ENV requests a single numerical value to apply all year round; permit limits that have to be calculated on an ongoing basis are not the preferred approach for compliance purposes. Please provide rationale and a single numerical value to apply year-round to reflect proposed permit limits for the following parameters: 1) FWR: Nitrite-N, Sulphate and Total Chromium, and 2) TSF Stage 1 SCP: Total Chromium.	Please see attachment "R4_ENV_Comment ID 2235.pdf"		BC ENV (Andrew Foster)	Lorax				Oct. 12		Ready for Publishing
2235	Joint MA/EMA Permits Application Section 5.8	Effluent	BC ENV (E. Rainey)		28-Oct-22	2	Follow Up		No	•Proposed permit limit for sulphate = 309 mg/L olf the permit limit is supposed to be equal to BC WQGs, then the calculation of the guideline for sulphate should consider the baseline hardness of Davidson Creek, not the predicted hardness of the FWR effluent. oPlease summarize the baseline hardness for Davidson Creek at WQ28 for comparison to the predicted hardness that is shown in Figure 3-3 of the response memo. oPlease recalculate the sulphate guideline using the baseline hardness from Davidson Creek.	Please refer to attachment "R2_ENV Comment ID 2235.pdf"		BC ENV (Andrew Foster)	Lorax				Nov. 20	GM; Nov 14	Ready for Publishing
2236	R2_BC_ENV_ID27_R3_ENV_34(2) 34(10 and 2177.pdf	Effluent	BC ENV (E. Rainey)		27 Sep, 2022	1	New		No	Table 2-5 in the response memo presents the revised values for proposed SBEB in Davidson Creek and Creek 661. Whereas, the proposed permit limits for the FWR for dissolved aluminum (Table 5.8-4) in the application are listed as follows: Jan, Feb Mar - BC WQG of 0.05 mg/L Apr to Jul - 0.26 mg/L Aug to Dec - 0.11 mg/L Please confirm if the below values from Table 2-5 for WQ28 are now meant to be considered by ENV as the proposed permit limits for the FWR: Jan, Feb Mar - BC WQG of 0.05 mg/L Apr to Jul - 0.28 mg/L Aug to Dec - 0.13 mg/L	The proposed dissolved aluminum permit limits for the FWR are intended to be consistent with the SBEB for WQ28, once approved. The reviewer is correct in that the latest version of the WQ28 SBEBs (via Comment Response memo "R2_ENV Comment ID 27_R3_ENV Comment IDs 34(2), 34(10), 2177.pdf") are proposed to ENV as permit limits for the FWR: Jan, Feb Mar - BC WQG of 0.05 mg/L (monthly average) Apr to Jul - 0.28 mg/L Aug to Dec - 0.13 mg/L		BC ENV (Andrew Foster)	Lorax				Oct. 5	GM; Oct 5	Ready for Publishing
2237	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent - Post Closure Water Quality	BC ENV (N.Bailey)		05-Oct-22	1	New	QP Response Required	No	Provide further rationale for the use of reverse osmosis membrane water treatment system during post closure instead of a treatment technology that results in a solid by-product. The response should expand on the information already provided in the BQE Water memo "Blackwater Membrane WTP Best Achievable Technology Evaluation (ITT 114)" dated August 30, 2022 (BQE memo)	Please see "R5_EMLI Comment 411c_Near Term Evaluations_Final,pdf"		BC ENV (Neil Bailey)	BQE				26-Oct		
2238	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent - Post Closure Water Quality	BC ENV (N.Bailey)		05-Oct-22	1	New	QP Response Required	No	Identify and summarize parameters of concern (POC) in all potential sources of effluent discharge to Davidson Creek in post-closure, including the open pit and tailings storage facilities (TSF), considering applicable BC water quality guidelines (BC WQGs).	Please refer to attachment "R1_ENV Comment ID 2238.pdf" and "R1_ENV Comment ID 2238_Appendix A.xlsx"		BC ENV (Neil Bailey)	BQE				Oct. 26	GM; Nov 21	Ready for Publishing
2239	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent - Post Closure Water Quality	BC ENV (N.Bailey)		05-Oct-22	1	New	QP Response Required	No	Conduct a risk assessment to identify a preferred alternative treatment option for post- closure (excluding reverse osmosis or nano-filtration) considering the technologies presented in the BQE memo. The risk assessment must provide a comparison to the base case treatment scenario (reverse osmosis) for post-closure including, but not limited to: otreatment effectiveness, oachievability of BC WQGs, opredicted effluent quality post-closure, ooperating and capital costs, and olong-term management of treatment by-products.	Please see "R5_EMLI Comment 411c_Near Term Evaluations_Final,pdf"		BC ENV (Neil Bailey)	BQE				Oct. 26		
2240	Joint MA/EMA Permits Application Chapter 5, Section 5.6.3	Effluent - Post Closure Water Quality	BC ENV (N.Bailey)		05-Oct-22	1	New	QP Response Required	No	Provide a post-closure treatment report that summarises the POC evaluation as well as the relative risk of the base case scenario (reverse osmosis) compared to the identified preferred alternative treatment option, including considerations of future risk (feasibility of developing a water treatment technology for treatment of the brine).	Please see "R5_EMLI Comment 411c_Near Term Evaluations_Final,pdf"		BC ENV (Neil Bailey)	BQE				Oct. 26		

2241	Appendix 7-A		LDN/UFN Brenley Yuan		06-Oct-22	1	New		No	Are there provisions in place to change sampling plan/methods if the current methods are ineffective at capturing meaningful data? If this is not currently indicated in the AEMP, please revise the next version to include this commitment. This would also enable changes in the other direction - if early sampling suggests that the current program is unnecessarily rigorous.	Yes, there are provisions in the Aquatic Effects Monitoring Program (AEMP) Plan (Appendix 7-A) to modify the AEMP if warranted. For example, Section 6.1 of the AEMP Plan (specifically page 6-2, the text and bullets starting with "Monitor") indicate that BW Gold will review and update monitoring plans to review "*the monitoring program in terms of effectiveness in detecting effects; recommendations provided by a QP for changes to the monitoring plan, objectives, frequency, methods, or timing …*". Similar text can be found in Section 7.2 (indicating that the AEMP Plan will be evaluated each year as part of the annual report). Text is also provided in Section 2.3 of the AEMP Plan to indicate that BW Gold intends to continue with engagement and consultation with Indigenous groups and regulators on any future revisions to the AEMP Plan, and that the AEMP Plan would be evaluated annually as part of reporting.		LDN/UFN Brenley Yuan	ERM				Ready for Submission	TD, Oct 17	Ready for Publishing
2242	Appendix 7-A; Table 4.2-3		LDN/UFN Brenley Yuan		06-Oct-22	1	New		No	In Table 4.2-3 (Page 4-10), what will the frequency of sampling be after the indicated initial years of annual sampling?	Please refer to the first paragraph on page 4-7 of the Aquatic Effects Monitoring Program Plan (Appendix 7-A). This paragraph states that: "*However, certain components will be conducted annually initially with a framework to decrease sampling frequency by one year after each three-year period in which no effects are identified, to a minimum sampling frequency of once every three years (components shown as "annual for the first three years" in Table 4.2-3). Once sampling frequency is decreased to once every two or three years, frequency would be increased again by one year if effects were identified, up to a maximum frequency of annually. Components that will be sampled under this variable frequency framework are: 5-in-30 water quality, surface water toxicity testing, sediment quality, aquatic resources (periphyton and benthic invertebrates), and fish inventory (Table 4.2-3).*"		LDN/UFN Brenley Yuan	ERM				Ready for Submission	TD, Oct 17	Ready for Publishing
2242	Appendix 7-A; Table 4.2-3		LDN/UFN Brenley Yuan		17-Nov-22	2	New		No	Thank you for your response. Does the AEMP specify the total minimum monitoring period (e.g. until closure? until post-closure? number of years?).	As indicated in Section 1.1 of the AEMP Plan (Appendix 7-A, March 2022), the text states that "*The focus of this AEMP is on Construction and Operations phases. ..A future permit amendment or a new authorization will be required for Closure and Post-closure phases, which will include an AEMP plan that may be a revised version of the plan described herein. However, to be conservative, it has been assumed that the AEMP described herein will continue into the Closure and Post-closure phases* ". This means that the AEMP Plan that will be implemented during Construction and Operations phases will continue into Closure or Post-closure phases unless otherwise approved under a revised AEMP Plan. In Attachment B of the AEMP Plan (Chedakuz Creek and Tatelkuz Lake Surface Water Quality Monitoring Plan), text was included in Section 4 to indicate that a Qualified Professional "*may determine that sufficient sampling has been completed under the Plan and recommed the termination of selected or all long-term monitoring through the Closure and Post-closure phases* ". The text also provides examples of rationale that could be a basis for recommendations of terminating or modifying water quality monitoring. Note that monitoring under the AEMP Plan cannot be modified or terminated unless approved by BC EAO (under the EA Certificate) or BC ENV (under the EMA permit), and would include engagement with Indigenous nations before changes are made. This text (and the whole Chedakuz Creek and Tatelkuz Lake Surface Water Quality Monitoring Plan) will be moved from Attachment B and incorporated into the AEMP text in the next iteration of the AEMP Plan.		LDN/UFN Brenley Yuan	Entia				Ready for BWG Review	TD, Nov 23	Ready for Publishing
2243	Joint MA/EMA Permits Application All Chapters		CSFN		11-Oct-22	1	New	Recommended Permit Condition	Yes	CSFN requires that all commitments made by BW Gold in the responses provided from Round 2 of Detailed Review onward be captured in the permit.	BW Gold acknowldges the comment and has been tracking all commitments made in the responses provided from Round 2 of Detailed Review onward.		CSFN	BWG		Travis		Ready for Submission	TD, Oct 17	Ready for Publishing
2244	Joint MA/EMA Permits Application End Land Use Plan	Post-Mine Land and Aquatic Capability	CSFN (Gary Hamilton)		11-Oct-22	1	New	Information Request	Yes	In the July 2022 version of the Blackwater Gold Project End Land Use (ELU) Plan, it is stated that: "During Post-closure, the Pit Lake will be maintained as a groundwater sink to mitigate potential seepage from entering Davidson Creek and Creek 661 via the TSF C pond and TSF Spillway." This assumes that the water level in the pit will be maintained at an elevation lower than the water level in TSF C pond. The water level at TSF C pond is designed to be at 1344 m elevation at closure. The lowest pit crest elevation is designed to be at 1490 m elevation at the lowest point. In order to maintain the pit lake as a groundwater sink, the water level in the Pit Lake must be maintained more than 146 below the lowest point of the crest of the pit. The closure plan states that the "Pit Lake will be actively managed at an elevation below its natural decant." The natural decant elevation for the pit is at 1490	Operation of the pit lake as a groundwater sink does not require the pit lake level to be less than the water level of the TSF C Pond as assumed by the reviewer. Maintaining the pit lake at a depth of approximately 40 m below the lowest pit crest (ie., at an elevation of 1,440 masl) is predicted to be sufficient at maintaining the pit as a groundwater sink. A pit lake depth of 40 m is predicted to prevent seepage from leaving the pit and would maintain the groundwater flow direction inward toward the lake. North of the deposit beyond the cone of water level depression, a groundwater flow divide will exist between the pit lake and the TSF that will separate the local groundwater flow systems adjacent to the two facilities. The target Post-Closure pit lake water level included in the Application was developed using three		CSFN (Gary Hamilton)	KP		Jordan	AT/KP	Ready for Submission	GM; Oct 26	Ready for Publishing
2245	Joint MA/EMA Permits Application End Land Use Plan	Post-Mine Land and Aquatic Capability	CSFN (Gary Hamilton)		11-Oct-22	1	New	Information Request	No	There is a provision for the end-dumping of any Low-Grade Ore, which is PAG, that is not processed into the pit at the lowest pit crest elevation. Information Request: Please provide rationale on how Low-Grade Ore that is not processed will be saturated with water if the water level in the Pit Lake is maintained at an elevation that is more than 150 below the lowest pit crest elevation.	Please see the response to Comment 2244. The recommended depth to maintaint the pit lake in Post-Closure is approximately 40 m below the lowest crest elevation, not 150 m below. This is the estimated water level depth that would maintain the pit as a groundwater sink with an inward flow of groundwater around the pit permiter. A water level surface that is 40 m below the lowest pit crest will result in a pit lake that is more than 300 m deep and of sufficient capacity to saturate any Low-Grade Ore placed in the open pit, if required.		CSFN (Gary Hamilton)	KP		Cindy	AT/KP	Ready for Submission	GM; Oct 26	Ready for Publishing
2246	Joint MA/EMA Permits Application End Land Use Plan	Proposed Mitigation Measures	CSFN (Gary Hamilton)		11-Oct-22	1	New	Information Request	No	The ELU Plan states: "Final pit walls will be maintained steepened to limit littoral zone and discourage emergent and wetland vegetation growth, as will be described in ELUP." Information Request: How will the final pit walls be maintained steepened if Low-Grade Ore is end-dumped into the pit at the lowest pit crest elevation?	Should Low-Grade Ore be required to be rehandled back into the pit, the material will be hauled and end-dumped below the planned pond elevation of 1440 m.		CSFN (Gary Hamilton)	BWG				Ready for Submission		Ready for Publishing
2247	Joint MA/EMA Permits Application End Land Use Plan	Water Quality - Reclaimed Mine Site and Receiving Environment	CSFN (Gary Hamilton)		11-Oct-22	1	New	Information Request	No	The ELU Plan states: "…. Davidson Creek may not be potable during the months of April and May during post closure." Information Request: How will surface water be managed during the months of April and May to ensure receiving environment water quality is suitable for human consumption?	There are no management activities specific to management of surface water in Davidson Creek during the months of April and May during Post-Closure. As required by EAC Condition 43 mitigation No. 15-6, BW Gold is required to post signs and inform the public that consumption of water is not advisable during the months of April and May (freshet conditions) during Post-Closure. This mitigation measure required by Condition 43 was based on water quality modelling completed during the environmental assessment. As noted in Section 4.4 of the Country Foods Monitoring Plan signs will be installed at or near the TSF, the pit lake, and in Davidson Creek "*indicating that consumption of surface water is not advisable* " year round. BW Gold has optimized mine site water management (and improvements to water quality) and will continue to look at for opportunities to further optimize water management to improve water quality in the downstream environment, Davidson Creek. BW Gold completed a revised human health risk assessment (HHRA) of the effects of environmental media quality (e.g., soil, water, air, country foods) associated with the optimized Project on human health (see Appendix 5.6-1 of ERM 2022). The results of the updated HHRA concluded that no adverse effects on human health were predicted and that the conclusions of the updated human health effects assessment were similar to those provided in the environmental assessment. ERM. 2022. Blackwater Gold Project: Response to Impact Assessment Agency of Canada Letter dated May 20, 2021. Prepared for BW Gold Ltd. by ERM Consultants Canada Ltd.		CSFN (Gary Hamilton)	ERM	Entia			Ready for Submission	TD, Oct 18	Ready for Publishing
2248	Joint MA/EMA Permits Application Chapter 3 Mine Plan Section 3.5.2.8	Process Flow	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Information/Clarification Request	No	In section 3.5.2.8 Process Flow there is no mention of control rooms. Will there be control rooms for an operator? If so, will the control room be separated from the crusher to reduce vibration, the room designed/built to reduce noise and pressurized and the air filtered to reduce exposure to silica and other particulates? Has the room been designed for visibility and interaction with controls for the operator to reduce the risk of musculoskeletal disorders? Will there be thermal controls to regulate the work environment for the operator? Similarly, will there be appropriate control rooms for the electrowinning or other mill processes?	The process plant, including crushing, will be controlled centrally from a standalone control room building. The building will provide a typical office environment with heating and ventilation to maintain comfortable working conditions. Any local control panels will only be used for equipment commissioning, maintenance and troubleshooting purposes.		EMLI (Caroline Nakatsuka)	BWG					GM; Nov 3	Ready for Publishing

2249	Joint MA/EMA Permits Application Chapter 3 Mine Plan Section 2.5.2.9	Other Plant Site Facilities	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Information/Clarification Request	No	In section 2.5.2.9 Other Plant Site Facilities a laboratory is listed. Will the fire assay tasks be completed in a segregated section of the laboratory? Will there be a separate toilet/shower/change facility for the fire assayers and will there be a designated area for the cleaning of lead contaminated clothes/tools? A guidance document is available that provides additional information on appropriate lead mitigation measures, A Guideline to Reducing Inorganic Lead Exposure in Fire Assay Laboratories.	The lab building/facilities/operation will be contracted out to a suitably qualified assaying laboratory provider. The design has not yet been finalized but will incorporate industry best practice and meet all application regulatory requirements.		EMLI (Caroline Nakatsuka)	BWG					GM; Nov 3	Ready for Publishing
2250	Joint MA/EMA Permits Application Chapter 3 Mine Plan Section 3.4.11.8	Truck Shop	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Information/Clarification Request	No	In section 3.4.11.8 Truck Shop and Wash/Mine Office there is no mention of shop ventilation, neither general ventilation nor local exhaust ventilation. Will there be adequate general shop ventilation and local exhaust hookups for vehicles and local exhaust arms for welding activities?	Site will use a combination of equipment & devices including ventilation fans, portable extraction units for welding, Air Powered Respirator Welding Helmets. This is part of the operations readiness for the workshops. **Notes for close out date on this action (BWG Internal Purposes):** *By 2023-05-01 both the BWG Occupational Health and Safety Crews would have had chance to review any new risks and agree on risk controls measures regarding the workshop building ventilation and other topics. Alastair Tiver and Craig Hodder have workshop design details, they will be able to provide details on any specific questions around the building ventilation details. Any workshop fit-out items like portable extraction units for welding will be purchased by Craig Hodder. Air Powered Respirtator Welding Helmets will likely be a store stock item.*		EMLI (Caroline Nakatsuka)	BWG						Ready for Publishing
2251	Joint MA/EMA Permits Application Chapter 8 Health and Safety Program Section 8.6.14.1	Workplace Monitoring	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Comment	No	Please note that there are changes expected to the workplace monitoring procedures guidance document that will result in more clearly defining what constitutes a comprehensive occupational health program by outlining the requirements for assessment, evaluation/analysis, and control of occupational health hazards. As such, the workplace monitoring program prepared by mines should address these occupational hygiene principles and not be solely focussed on exposure monitoring.	Noted.		EMLI (Caroline Nakatsuka)	BWG						Ready for Publishing
2252	Joint MA/EMA Permits Application Chapter 8 Health and Safety Program	Add msd prevention	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Comment/Clarification Request	No	Similarly to workplace monitoring programs, a comprehensive ergonomics program for the prevention of musculoskeletal disorders must be prepared. While there are some elements of such a program mentioned in the health and safety program a musculoskeletal disorder prevention program is not discussed. There is also no mention of the use of ergonomic assessments. For other occupational health hazards/risks an approach of risk assessments followed by appropriate actions and controls is described. Will this be done for ergonomic hazards as well?	MSD Prevention along with other risk factors, will be covered in project's HAZOP prior to construction. On site, the OHSC members will be provided training pursuant to HSRC Part 1.6.9 (1)(h) prior to the operations. **Notes for close out date on this action (BWG Internal Purposes):** *Sedman Hazop will be completed by 2023-03-15 and any feedback regarding construction related activities will be provided to them. By 2023-05-01 both the BWG Occupational Health and Safety Crews would have had a chance to review any new risks and agree on risk controls measures.*		EMLI (Caroline Nakatsuka)	BWG						Ready for Publishing
2253	Joint MA/EMA Permits Application Chapter 8 Health and Safety Program	Respiratory protection program	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Comment/Clarification Request	No	What about worker training? What about quantitative testing? Fit testing can be done on disposable paper masks.K3696	Respiratory Protection along with other risk factors, will be covered in project's HAZOP prior to construction. Prior to operations, on site quantitative testing program will be set up. On site Health and Safety team will provide fit testing services on site and train the workers. **Notes for close out date on this action (BWG Internal Purposes):** *Sedman Hazop will be completed by 2023-03-15 and any feedback regarding construction related activities will be provided to them e.g fit testing for construction workers carrying out sandblasting or painting works; By 2023-05-01 both the BWG Occupational Health and Safety Crews would have had a chance to review any new risks and agree on risk controls measures.*		EMLI (Caroline Nakatsuka)	BWG						Ready for Publishing
2254	Joint MA/EMA Permits Application Chapter 8 Health and Safety Program	Hearing Conservation Program	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Comment	No	There is no mention of worker training in the hearing conservation program.	Hearing Conservation with other risk factors, will be covered in project's HAZOP prior to construction. Prior to the operations, in liaison with OHSC, a hearing conservation program will be established. **Notes for close out date on this action (BWG Internal Purposes):** *Sedman Hazop will be completed by 2023-03-15 and any feedback regarding construction related activities will be provided to them; By 2023-05-01 both the BWG Occupational Health and Safety Crews would have had a chance to review any new risks and agree on risk controls measures.*		EMLI (Caroline Nakatsuka)	BWG						Ready for Publishing
2255	Joint MA/EMA Permits Application Chapter 8 Health and Safety Program	Hot Work	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Comment	No	Under the Hot work section there is a statement that says "check if extraction required". Extraction/local exhaust should always be made available as in most instances, even when outdoors, it will be needed to keep exposures below the required limits. Natural air movement outdoors is not usually sufficient to remove contaminants generated while welding, cutting, etc. as the exposure limits are very low for some contaminants.	Site will use a combination of equipment & devices including ventilation fans, portable extraction units for welding, Air Powered Respirator Welding Helmets. This is part of the operations readiness for the workshops. For construction works, the adequate ventilation with other risk factors, will be covered in project's HAZOP prior to construction. **Notes for close out date on this action (BWG Internal Purposes):** *Sedman Hazop will be completed by 2023-03-15 and any feedback regarding construction related activities will be provided to them. By 2023-05-01 both the BWG Occupational Health and Safety Crews would have had a chance to review any new risks and agree on risk controls measures.*		EMLI (Caroline Nakatsuka)	BWG						Ready for Publishing
2256	Joint MA/EMA Permits Application Chapter 8 Health and Safety Program Section 8.6.14.5	Mine Dry	EMLI (Caroline Nakatsuka)		17-Oct-22	1	New	Comment/Clarification Request	No	In the Mine Plan documents there is no mention of mine drys for workers/employees of the processing plant. There is mention of mine drys in general in the health and safety program but no details on where they will be located. Will there be adequate mine dry facilities dedicated for processing plant as well as pit employees/workers? Facilities at the camp are not appropriate for this use. Also please note that to be more inclusive of all peoples that gender neutral/universal drys should be included as well as male and female.	There will be separate change areas "Drys" provided for the process plant and mine services area. Both will be located within the espective areas and are separate from camp facilities.The process dry will cater for approximately 30 incoming and 30 outgoing personnel. The mine dry in the mine services area that will cater for approximately 80 incoming and 80 outgoing mine operations and mobile maintenance personnel. Separate gender facilities will be provided based.		EMLI (Caroline Nakatsuka)	BWG					GM; Nov 3	Ready for Publishing
2257	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_16	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	QEP, should now be QRP (RPBio) in light of the recent change to legislation (sept 2022) right to title and right to practice.	Agreed. Given the College of Applied Biologists' Reserved Practice Compliance Plan to meet the conditions of the Professional Governance Act, the Qualified Environmental Professional (QEP) designation should be changed to Qualitfied Registered Professional (QRP) throughout.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing

2257	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_16	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Revise applications	The revision from QEP to QRP has been made in the application documents.		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2258	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_17	LWRS (Luc Turcotte)		03-Nov-22	1	New	information requirement	No	1.1 Proposed offsetting measures please provide link to Appendix E, not listed/found on share point.	Please see the Appendix E Ofsetting Plan - CEMP, included in attachment "R1_LWRS_Comment ID 2258.pdf"		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2259	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_18	LWRS (Luc Turcotte)		03-Nov-22	1	New	information requirement	No	1.1.3 Creek 661 Off-channel Overwintering Pond which baseline studies identified lack of overwintering habitat as limiting? Please provide report names and page numbers, and reference in document.	The baseline studies performed for the EIS/EA Application determined overwintering habitat is a key limiting factor in fish production in Creek 661, with only two identified potential overwintering locations (Section 5.8.3.4 of AMEC 2013). This information has been added to the document. AMEC. 2013. Fish and Aquatic Resources 2011-2012 Baseline Report. Appendix 5.1.2.6A. Prepared for NewGold for the Blackwater Gold Project by AMEC. June 2013.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2260	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_19	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	No	1.1.3 Creek 661 Off-channel Overwintering Pond 'leaky bank' - is this subject to clogging? fines & organics will maintenance be needed long term?	The 'leaky bank' is deliberately positioned along the outer bank of a meander, where deposition of sediments or organics does not naturally occur. The gradation within the bank prevents clogging with fines for the same reason that fines are commonly winnowed and "piped" from natural or built embankments subject to a hydraulic gradient, as is the case here. Due to the hydraulic gradient, fines will be preferentially (albeit very slowly/incrementally) transported through the coarse gravelly lattice. The top of the leaky bank will be covered with 300 mm of topsoil and seeded with a native mix. When the leaky bank is overtopped, under flood conditions, sediments in suspension may deposit on the top of the bank. However, the planted/restored ground surface will prevent fines from infiltrating into the interstitial spaces within the leaky bank. The system is designed to be self-flushing and can even accommodate localized reduction in permeability given the hydraulic head that will persist. Similar scenarios manifest naturally in creek systems throughout BC, where creek water seeps through floodplain sediments into a 'blind channel'.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2261	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_20	LWRS (Luc Turcotte)		03-Nov-22	1	New	Question/ Comment	No	1.1.4 Lake 15/16 Connector Channel "Natural lake level fluctuations may result in Lake 16 water levels below 1,344.1 masl, which may lead to occasional periods of discontinuous or no flow from August to October, which is outside expected migratory periods (i.e., late April to July)." - if the lake level falls below 1344.1 masl this wouldn't this negate offsetting benefits, it would seem that the connector channel is more of a water management tool than off setting due to the diversion of upper Davidson Creek	The Lake 15/16 connector channel is not a required project component. The connector channel construction is not necessary for any mining-related activity, nor does it provide any benefit for water management on the mine site. However, construction of the channel is specified under Condition 3.13 of the federal Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 for the Blackwater Project. The proponent is obligated to construct the channel to maintain compliance with the Condition. The sole purpose of the connector channel is to maintain the fish community in Lake 16 that would be entirely isolated by the mine site development if no connector was constructed. Construction of the connector channel provides a linkage between the two lakes to preserve the Rainbow Trout population and their habitat in Lake 16. As such, the connector channel has been designed to maximize fish habitat potential, while providing adequate flows for passage during a wide range of water levels. Fish habitat enhancements, including complex channel design, woody debris structures, and boulder clusters have been incorporated into the design to provide further direct benefit to fish using the channel. As indicated, potential low-flow conditions are likely only outside migratory periods, which will not disrupt the purpose of the channel or affect its habitat rating as this loss would occur only in the ~100 m stream section that will not contain any habitat structures. The remaining ~400 m in-lake section with habitat structures will remain functional during low-flow periods.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2262	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_21	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	10.2 Reptiles and amphibians paragraph 2 - " 9.1Error! Reference source not found.."	Apologies for the formatting error, citations and references will be reviewed and updated in the next iteration of the submission		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 14	Ready for Publishing
2263	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_22	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	10.2 Reptiles and amphibians section 10.2 add wording aroound timing windows for the proposed works around reptiles and amphibians, ex spring breeding season, juvenile migration - western toad (Anaxyrus boreas), language is currently generic. please Link to WMMP.	Section 10.2 will be updated to read: "The sensitive period for amphibians is defined as the breeding period for Western toad (April 1 - September 30), a species which is federally listed on Schedule 1 of the *Species at Risk Act* (SARA) as Special Concern (Government of Canada 2022). Mitigation and pre-clearing protocols are included in the Wildlife Mitigation and Monitoring Plan (WMMP) Section 4.1. Prior to construction during the sensitive period, a sweep of the area will be conducted by the QEP who is familiar with the life histories of reptiles and amphibian species that may be present in the area. A salvage of reptiles and amphibians within the work areas may be required prior to the start of construction if such species are identified during the pre-construction sweep, which will be conducted according to methods in the WMMP and the Amphibian Salvage Standard Operating Procedure (SOP). The salvage would be conducted in coordination with the fish salvage activity described in Section 9.1. A Wildlife Act permit will be obtained prior to conducting the reptile and amphibian salvage which authorizes the live capture and release of native turtle and amphibian species. The permit also allows live capture of non-native reptile and amphibian species and mandates their humane euthanization."		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2263	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_22	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, one edit QEP should be QRP see comment 2257.	BWG acknowledges this comment and can revise the text to specify QRP instead of QEP if the document is revised		LWRS (Luc Turcotte)	ERM		Greg			TD, Dec 19	Ready for Publishing
2264	WSC - Ancillary Authorizations	Appendix F_Offsetting Plan - Cemp_2021_09_23	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	11 Surface water quality paragraph 5, page 23 and in table 1 (page 24) please add reference to BC NTU, TSS guidelines https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-guidelines/approved-wqgs/bc_env_turbidity_waterqualityguideline_technical.pdf	This recommended citation and reference has been added to the document.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2265	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	information requirement	No	overwintering habitat which baseline studies identified lack of overwintering habitat as limiting? Please provide report names and page numbers, and reference in document.	The baseline studies performed for the EIS/EA Application determined overwintering habitat is a key limiting factor in fish production in Creek 661, with only two identified potential overwintering locations (Section 5.8.3.4 of AMEC 2013). This information has been added to the document.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2266	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211124	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	overwintering habitat please explain how incorporating groundwater in the overwintering pond will maximize dissolved oxygen, groundwater is generally low in dissolved oxygen.	As described in IR2260, surface water from the creek is being drawn a short distance through a cobble/gravel leaky bank, in the subsurface, into the adjacent pond. The water that enters the pond is better characterized as throughflow, rather than strictly groundwater. This is the process of hyporheic exchange (i.e., the mixing of surface and shallow subsurface water through porous sediment surrounding a stream) that naturally forms local upwellings along sections of meanders. The introduction of this through-flow will help elevate oxygen levels and mix water within the pond beyond what would occur in only a backwater feature.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing

2266	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211124	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	clarification	No	Thank you. It is important to distinguish between water that is of hyporheic origin and deeper groundwater, as the two can have very different characteristics. Consider, in future iterations defining groundwater or using hyporheic terminology. The influence of deep groundwater on aquatic habitats is important to consider in the LSA, as it could have a greater influence on winter stream water temperatures than hyporheic water. Without looking at the chemistries of upwelling locations the source of water cannot be determined. The intent of the groundwater interceptor basin is to collect deep groundwater and augment pond flows and help regulate temperatures correct?	We will consider including 'hyporheic exchange' instead for future iterations. One of the functions of the groundwater interceptor basin will be to collect groundwater to augment pond flows and help regulate temperature. The groundwater basin and channel will only be dug approximately 0.5 m below the groundwater table. The pond, excavated to a maximum depth of approximately 5.5 m below existing ground, will interact with deeper groundwater.		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2267	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211125	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	leaky bank - Long term, how will the leaky bank function with clogging of organics (leafs) and sand/silt?	The 'leaky bank' is deliberately positioned along the outer bank of a meander, where deposition of sediments or organics does not naturally occur. The gradation within the bank prevents clogging with fines for the same reason that fines are commonly winnowed and "piped" from natural or built embankments subject to a hydraulic gradient, as is the case here. Due to the hydraulic gradient, fines will be preferentially (albeit very slowly/incrementally) transported through the coarse gravelly lattice. The top of the leaky bank will be covered with 300 mm of topsoil and seeded with a native mix. When the leaky bank is overtopped, under flood conditions, sediments in suspension may deposit on the top of the bank. However, the planted/restored ground surface will prevent fines from infiltrating into the interstitial spaces within the leaky bank. The system is designed to be self-flushing and can even accommodate localized reduction in permeability given the hydraulic head that will persist. Similar scenarios manifest naturally in creek systems throughout BC, where creek water seeps through floodplain sediments into a 'blind channel'.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2268	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211126	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	QEP, should now be QRP (RPBio) in light of the recent change to legislation (sept 2022) right to title and right to practice.	Agreed. Given the College of Applied Biologists' Reserved Practice Compliance Plan to meet the conditions of the Professional Governance Act, the Qualified Environmental Professional (QEP) designation should be changed to Qualified Registered Professional (QRP) throughout.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2269	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211127	LWRS (Luc Turcotte)		03-Nov-22	1	New	information requirement	No	Effectiveness Monitoring Plan not found on share point please provide a copy.	Please see attachment "R1_LWRS_Comment ID 2269 and 2278.pdf "		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2270	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211128	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	No	6.2 Adaptive Management "The monitoring and adaptive management program will be concluded when habitat offsetting sites have reached the defined criteria for determining success, and thus, when the goal of counterbalancing habitat loss has been achieved." - what are the defined criteria for determining success?	Success Criteria as stated in (Palmer 2022) include the following: 1) Physical Stability - Bed, bank, and constructed habitat features (boulders, brush layers, woody debris) show no significant signs of erosion, migration or sedimentation that may impact habitat functionality. Repeat cross-sectional measurements at representative sites will help substantiate visual interpretations. 2) Flow - Restored habitat remains wetted with sufficient flow for use by rainbow trout. 3) Water Quality - Meet BC ENV water quality guidelines for the protection of freshwater aquatic life. 4) Fish Presence/Absence - Restored areas provide habitat for rainbow trout of various life stages relative to prerestoration and reference site data. 5) Fish Abundance/Biomass - Rainbow trout relative abundance and biomass in compensation area is comparable to prerestoration and reference site data. 6) Fish Size-Class Distribution - Rainbow trout size classes are comparable to pre-restoration and reference site data 7) Riparian vegetation Survivorship and % Cover- No more than 30% mortality of planted riparian vegetation after the third year and annual increases of 5-10% cover. 8) Animal Activity - Beaver dams do not block fish access to compensation ponds, and are evaluated as temporary structures. Less than 5% of planted riparian vegetation affected by wildlife browse after first year. These eight success criteria are currently being further refined to have greater specificity in consultation with First Nations and other regulators (e.g., DFO).		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2270	WSC - Ancillary Authorizations	Creek_661_Wsa_Memo_20211128	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	question	No	Thank you, Please reference (Palmer 2022 - Fisheries Offsetting Habitat Effectiveness Monitoring Plan) in text, and the refined criteria as available.	BWG acknowledges this comment		LWRS (Luc Turcotte)	Palmer						
2271	WSC - Ancillary Authorizations	Creek 661 - total calculated area	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	instream works area calculation - leaky bank based on my understanding of the overwintering pond design, wouldn't leaky bank need a portion of instream works to conned it and make it functional as designed. Overview of calculated instream works area does not show this, see drawing 005 detail A, drawing 006 (1824-3-10- Creek 661 OWP - Rev D - Issued for Permit Approval May 26, 2021	Construction of the leaky bank will require work to be completed within Creek 661. Design details and Erosion and Sediment Control (ESC) measures are provided on Drawings 005, 006, and 008. The leaky bank has not been included as a habitat gain. The leaky bank has an area of 153 m2. Along Creek 661 the leaky bank measures 36 m long and 0.65 m high (above the creek bed). Leaky bank width ranges from 6.5 to 15.5 m.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2271	WSC - Ancillary Authorizations	Creek 661 - total calculated area	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	clarification	No	Thank you, The toe of the leaky bank is not included in the instream works/disturbance figure while the downstream bend is (coloured in dark blue), is the leaky bank considered temporary/additive while the area in dark blue is a loss? The name of the sketch may have mislead my interpretation "Instream Works/Disturbance", prompting my original question.	We cannot locate the 'dark blue' colouring referred to in the information request. We assume you are referring to the disturbance area as indicated by the black dash line surrounding the proposed pond on drawing sheet 003. The disturbance area line abuts Creek 661 'water line' rather than fully encompassing the pond to avoid overlapping line types (e.g., 'approximate water line'). The 'Leaky Bank' and 'Connector Channel' (at the downstream bend) are both located within the disturbance area. The erosion and sediment control sketches on drawing sheet 006 indicate that these areas (Leaky Bank and Connector Channel) will require isolation from Creek 661 to complete works.		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2272	WSC - Ancillary Authorizations	Attachment 1 - 1824-3-12 Lake 15 16 - IFPA - 07-07-2021	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	groundwater language in design objectives can be misinterperated. 'THE CONNECTOR ARM/CHANNEL IS SITUATED AT A LOCATION WITH NATURALLY HIGH GROUNDWATER TABLE THAT WILL MAXIMIZE DISSOLVED OXYGEN' Groundwater is inherently low in dissolved oxygen, please revise text, Something to the effect of 'groundwater will promot base flows in channel while aggigation of groundwater over naturalized gravel cobble substraight and mixing of surface water will introduce oxygen.'	Thank you for the suggested text amendment. Groundwater language on the drawings and within the report will be updated to avoid/eliminate misinterpretation.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2273	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	groundwater similar to comment above "The naturalized lake outlet will intercept the naturally high groundwater table (1,344 to 1,346 masl as measured on June 30, 2013), which will maximize dissolved oxygen and potentially augment low flow within the outlet channel." Language here can be misinterperated, groundwater is inherently low in dissolved oxygen, please revise text. Something to the effect of 'groundwater will promot base flows in channel while aggigation of groundwater over naturalized gravel cobble substraight and mixing of surface water will introduce oxygen.'	Thank you for the suggested text amendment. Groundwater language on the drawings and within the report will be updated to avoid/eliminate misinterpretation.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2274	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	reference 5.1 reference not found - "Potential, unmitigated, adverse effects associated with implementation of offsetting measures are listed in Error! Reference source not found. below with associated mitigation measures summarized from the CEMP."	The broken link is for Table 6. This link has been fixed in the document.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2275	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	Wildlife as noted in the CEMP please add best practices timing window for the works around reptiles and amphibians, for example spring breeding season, summer juvenile migration - western toad (Anaxyrus boreas),	Table 6 section "Wildlife" will be updated to read: " - Sensitive period for Western toad is April 1 - September 30 - For construction planned during the sensitive period, a qualified environmental professional (QEP) will conduct a pre-construction sweep of the offsetting site... - Pre-construction and salvage work will follow protocols in the Wildlife Mitigation and Monitoring Plan (WMMP) Section 4.1 and the Amphibian Salvage Standard Operating Procedure"		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2275	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, one edit QEP should be QRP see comment 2257.	BWG acknowledges this comment and can revise the text to specify QRP instead of QEP if the document is revised		LWRS (Luc Turcotte)	ERM		Greg				

2276	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	No	5.3.1 Upper Reaches of Creek 705 - bank erosion 5.3.1 Upper Reaches of Creek 705 bank erosion - is there a post channel connection of lake 15,16 monitoring plan of the upper reaches of creek 705 to assess bank erosion? And if more than "some bank" erosion occures what is mititation plan?	Monitoring of the Creek 705 channel is planned downstream of the connector channel due to potential bank and stream changes up to 10 years post-construction of the Connector Channel due to the small increase (approximately 10%) in peak flows. Detailed habitat assessments (i.e., FHAP, topographic surveys) will be performed on the creek, downstream of the proposed Connector Channel location in the upper reaches of Creek 705, prior to Construction. This habitat information will be used in conjunction with baseline habitat information (FHAP) for Creek 705 (2013 REF) to compare against the predicted changes in the upper reaches: - channel widening and bank erosion in the first 250 m fen and wetland complex section downstream of Lake 15 - minimal changes in the next 800 m steeper [3%] section with armoured banks - moderate channel widening in final 2,400 m section with lower gradient [1%] Long-term monitoring of the predicted changes will include annual FHAP surveys of upper Creek 705 combined with topographic surveys up to 10 years post-Construction. If stream changes are observed with the potential to negatively affect fish habitat (e.g., significant bank instability) mitigation measures will be developed.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2277	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	5.4 Effects to Species Distribution and Fish Productivity in the context of this report and in the LSA, could Palmer and BW Gold define what they considered a fish population, stated on page 12 - 13, creek 705 has three rainbow trout populations. "Migratory rainbow trout from Fawnie Creek as well as resident rainbow trout populations in Lake 15 and Lake 14 use spawning habitat in Creek 705. Therefore, fry and juveniles that use Creek 705 in summer for rearing are a mixture of these three populations." If these populations mix and "Genetic studies on rainbow trout in each lake suggests existing connectivity between the watersheds" are they really sperate populations given such close proximity? "Genetic changes in the rainbow trout population are expected to be minor given baseline results indicating the similarity between rainbow trout in each watershed."	The term that should be used is sub-populations due to the potential for intermixing. Fish in sub-populations can spawn in the same areas as other fish in the region, but typically return to their resident area (e.g., Lake 14, Lake 15, Fawnie Creek). This term will be corrected in the document.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2278	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	No	5.4 Effects to Species Distribution and Fish Productivity "It is expected a monitoring program will be required and implemented to determine the effectiveness of this offsetting measure and as such will provide monitoring to confirm these predictions" - has this been developed yet?	Please see attachment "R1_LWRS_Comment ID 2269 and 2278.pdf "		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2279	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	Yes	5.5 Introduction of Pathogens or Parasites - has a parasite and pathogen inventoires in lake 15 & 16 been conducted?	A parasite-pathogen study was performed in 2021-2022 that involved collection of mucus and gill swabs from Rainbow Trout in 2021 that were analysed for seven common disease-causing viruses and bacteria. A report detailing the results was published by the BC Centre for Aquatic Health Sciences in September 2022 (CAHS 2022). Please see attachment R1_LWRS_Comment ID 2279_Pathogen Report.pdf (CAHS. 2022. Parasite/Pathogen testing from water and Rainbow Trout gill/mucus samples collected from Lake 15 and 16. Prepared for BW Gold Ltd. by the BC Centre for Aquatic Health Sciences. September 13, 2022.)		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2279	WSC - Ancillary Authorizations	Lake_16__WSA_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	question	Yes	[Potential Permit Condition] Is there a memo or summary of the field collection/study? Lethal sampling did not occur according to the CAHS report due to small population size, how were fish differentiated so as not to be sample repeatedly? Where they marked?	The field collection methods are described in Palmer (2022), including marking by clipping the adipose or pectoral fins. Palmer. 2022. Blackwater Gold Project Fish and and Aquatic Resources 2021 Field Survey Report. Prepared for BW Gold Ltd. by Palmer. August 2022.		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2280	WSC - Ancillary Authorizations	MDMER Schedule 2 Fisheries Compensation Construction Environmental Management Plan	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	No	11.2 Reptiles and Amphibians is there a is there a salvage plan developed for th is work? Link to WMMP	Section 11.2 will be updated to include the same content as comment response 2263.		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2281	WSC - Ancillary Authorizations	MDMER Schedule 2 Fisheries Compensation Construction Environmental Management Plan	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	11.2 Reptiles and Amphibians reference missing "Error! Reference source not found.."	Apologies for the formatting error, citations and references will be reviewed and updated in the next iteration of the submission		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2282	WSC - Ancillary Authorizations	MDMER Schedule 2 Fisheries Compensation Construction Environmental Management Plan	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	11.2 Reptiles and Amphibians please add language around timing windows for the works, ex. spring breeding season, juvenile migration - western toad (Anaxyrus boreas) listed as special concern under COSEWIC	Document section will be updated to include the same content as comment response 2263.		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing

2283	WSC - Ancillary Authorizations	Mathews Creek - Rev C - January 22, 2020_reduced (pt 2 of 2)	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	drawing # 008, 009, 010 Long term, how will the leaky bank function with clogging of organics (leafs) and sand/silt, or beaver activity? Are there examples of where this "leaky bank" has worked on other projects? What would the effect of freeze thaw, ice do to the functioning? As noted periviously - please explain how dissolved oxygen will be maximized.	See response to IR2260 regarding clogging potential of the leaky bank. The leaky bank was designed to draw a small amount of creek surface water, which is comparably high in dissolved oxygen, into the pond through the gravelly bank material. The process is essentially one of hyporheic exchange (i.e., the mixing of surface and shallow subsurface water through porous sediment surrounding a stream). The approach is not known to have a directly comparable project case study, but the concept is adopted directly from natural creek systems throughout BC. A proportion of creek flow typically seeps into the bank along the downstream arm of a meander and passes subsurface through the alluvial floodplain material until it re-emerges (discharges) into the upstream arm of the next meander downstream. In some cases, remnant oxbows and blind channels within the inside of the meander intercept and concentrate this through-flow. Both constitute hyporheic exchange. The off-channel habitat will benefit from additional surface water through-flow to improve oxygen levels within the pond during winter months. The groundwater interaction will help regulate temperature and provide a baseline for oxygen levels. The function of the pond resembles the methodology DFO applied to the creation of groundwater-fed side channels throughout BC (Lister and Finnigan 1997). The creek has sufficient groundwater contribution to maintain baseflow below a frozen surface during winter. As such, there will always be an unfrozen bottom portion to the leaky bank where water can pass under the hydraulic gradient. Freeze-thaw processes are not a concern for the leaky bank because it will not be constructed with “frost-susceptible” materials. Instead, the cobbly to gravelly material will remain well-drained where not at or below the groundwater table, which remains comparatively warm year round.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2284	WSC - Ancillary Authorizations	Mathews_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	2. project description missing reference - "Error! Reference source not found"	The broken link is for Figure 1. This link has been fixed in the document.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2285	WSC - Ancillary Authorizations	Mathews_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	Table 2. Potential Effects and Mitigations Associated with Implementation of Compensation Measures - add descrition for best practicies work windows for life stages of amphibians, breeding, rearing, juvenile migration.	Table 2 will be updated to include: - Sensitive period for Western toad is April 1 - September 30 - For construction planned during the sensitive period, a qualified environmental professional (QEP) will conduct a pre-construction sweep of the offsetting site and salvage as necessary - Install exclusion fencing, and monitor for effectiveness of the salvage and fencing - Mitigations and monitoring will follow protocols in the Wildlife Mitigation and Monitoring Plan (WMMP) Section 4.1 and the Amphibian Salvage Standard Operating Procedure		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2285	WSC - Ancillary Authorizations	Mathews_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, one edit QEP should be QRP see comment 2257.	BWG acknowledges this comment and can revise the text to specify QRP instead of QEP if the document is revised		LWRS (Luc Turcotte)	ERM		Greg				
2286	WSC - Ancillary Authorizations	Mathews_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	7.2 Adaptive Management what are the criteria for "The monitoring and adaptive management program will be concluded when habitat offsetting sites have reached the defined criteria for determining success"?	Success Criteria as stated in (Palmer 2022) include the following: 1) Physical Stability - Bed, bank, and constructed habitat features (boulders, brush layers, woody debris) show no significant signs of erosion, migration or sedimentation that may impact habitat functionality. Repeat cross-sectional measurements at representative sites will help substantiate visual interpretations. 2) Flow - Restored habitat remains wetted with sufficient flow for use by rainbow trout. 3) Water Quality - Meet BC ENV water quality guidelines for the protection of freshwater aquatic life. 4) Fish Presence/Absence - Restored areas provide habitat for rainbow trout of various life stages relative to prerestoration and reference site data. 5) Fish Abundance/Biomass - Rainbow trout relative abundance and biomass in compensation area is comparable to prerestoration and reference site data. 6) Fish Size-Class Distribution - Rainbow trout size classes are comparable to pre-restoration and reference site data 7) Riparian vegetation Survivorship and % Cover- No more than 30% mortality of planted riparian vegetation after the third year and annual increases of 5-10% cover. 8) Animal Activity - Beaver dams do not block fish access to compensation ponds, and are evaluated as temporary structures. Less than 5% of planted riparian vegetation affected by wildlife browse after first year. These eight success criteria are currently being further refined to have greater specificity in consultation with First Nations and other regulators (e.g., DFO).		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2286	WSC - Ancillary Authorizations	Mathews_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, Please reference (Palmer 2022 - Fisheries Offsetting Habitat Effectiveness Monitoring Plan) in text, and the refined criteria as available.	BWG acknowledges this comment		LWRS (Luc Turcotte)	Palmer						
2287	WSC - Ancillary Authorizations	Murray_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	clarification	No	6. Potential Effects and Mitigation Measures missing reference (page 12) - "Error! Reference source not found"	The broken link is for Table 2. This link has been fixed in the document.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2288	WSC - Ancillary Authorizations	Murray_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	Table 2. Potential Effects and Mitigations Associated with Implementation of Compensation Measures - please add descrition for best practicies work windows for life stages of amphibians, breeding, rearing, juvenile migration. Link to WMMP.	Table 2 will be updated to include: - Sensitive period for Western toad is April 1 - September 30 - For construction planned during the sensitive period, a qualified environmental professional (QEP) will conduct a pre-construction sweep of the offsetting site and salvage as necessary - Install exclusion fencing, and monitor for effectiveness of the salvage and fencing - Mitigations and monitoring will follow protocols in the Wildlife Mitigation and Monitoring Plan (WMMP) Section 4.1 and the Amphibian Salvage Standard Operating Procedure		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2288	WSC - Ancillary Authorizations	Murray_Wsa_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, one edit QEP should be QRP see comment 2257.	BWG acknowledges this comment and can revise the text to specify QRP instead of QEP if the document is revised		LWRS (Luc Turcotte)	ERM						
2289	WSC - Ancillary Authorizations	Murray_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	7.2 Adaptive Management what are the criteria for "The monitoring and adaptive management program will be concluded when habitat offsetting sites have reached the defined criteria for determining success"?	See the response to Comment ID 2286		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2289	WSC - Ancillary Authorizations	Murray_Wsa_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, Please reference (Palmer 2022 - Fisheries Offsetting Habitat Effectiveness Monitoring Plan) in text, and the refined criteria as available.	BWG acknowledges this comment		LWRS (Luc Turcotte)	Palmer						
2290	WSC - Ancillary Authorizations	Greer_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	5. Greer Creek Existing Conditions Page 13, hydrometric stn installed in 2020 - has a rating curve been developed yet?	A preliminary rating curve and a timeseries of continuous streamflow data were developed following the completion of the 2021 field season. This rating curve and the associated streamflow data will be updated following the completion of the 2022 field season so that it includes additional data from 2022.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing

2291	WSC - Ancillary Authorizations	Greer_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	Table 2. Potential Effects and Mitigations Associated with Implementation of Compensation Measures - add descrition for best practicies work windows for life stages of amphibians, breeding, rearing, juvenile migration.	Table 2 will be updated to include: - Sensitive period for Western toad is April 1 - September 30 - For construction planned during the sensitive period, a qualified environmental professional (QEP) will conduct a pre-construction sweep of the offsetting site and salvage as necessary - Install exclusion fencing, and monitor for effectiveness of the salvage and fencing - Mitigations and monitoring will follow protocols in the Wildlife Mitigation and Monitoring Plan (WMMP) Section 4.1 and the Amphibian Salvage Standard Operating Procedure		LWRS (Luc Turcotte)	ERM		Greg			TD, Nov 21	Ready for Publishing
2291	WSC - Ancillary Authorizations	Greer_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, Please reference (Palmer 2022 - Fisheries Offsetting Habitat Effectiveness Monitoring Plan) in text, and the refined criteria as available.	BWG acknowledges this comment		LWRS (Luc Turcotte)	Palmer						
2292	WSC - Ancillary Authorizations	Greer_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	7.2 Adaptive Management - what are the criteria for "The monitoring and adaptive management program will be concluded when habitat offsetting sites have reached the defined criteria for determining success"?	See the response to Comment ID 2286		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2292	WSC - Ancillary Authorizations	Greer_Creek_Wsa_Memo_20211123	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you, Please reference (Palmer 2022 - Fisheries Offsetting Habitat Effectiveness Monitoring Plan) in text, and the refined criteria as available.	BWG acknowledges this comment		LWRS (Luc Turcotte)	Palmer						
2293	WSC - Ancillary Authorizations	Appendix P_Offset Effectiveness Monitoring Program_2022_04_22	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	1.1.1 Murray Creek Habitat Enhancement - This project is far from the mine site (110 km) and has the posibility of duplicated effort with the Nechako Environment and Water Stewardship Socity (NEWSS). Could you provied the rational/context for this site selection?	There is no duplication effort, as BW Gold partnered with NEWSS to identify these sites and establish relationships with landowners. NEWSS has performed some work in the Murray Creek Watershed that is separate from these enhancement sites. Successful work in this watershed by NEWSS served as examples for selection of these sites. Parallel restoration projects in the same stream will further improve chances for meeting watershed restoration goals. Murray Creek provides habitat for a wide variety of fish populations including Rainbow Trout and Chinook. Both species have been identified as being highly valued to the Nations involved in review of this Project, and sensitive to habitat enhancements due to their stream resident life history. Fish passage barriers in the Nechako Basin limit Chinook migration close to the Project. Measures to enhance habitat of these highly-valued species had to be located further afield (e.g., Murray and Greer creeks) to supplement Project area enhancements to adequately offset habitat losses due to the Project. Detailed feedback on the Murray Creek enhancements has been received from the Nations and Federal regulators who have approved the location.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2294	WSC - Ancillary Authorizations	Appendix P_Offset Effectiveness Monitoring Program_2022_04_22	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	1.1.3 Creek 661 Off-channel Overwintering Pond reference missing - Fish Habitat Rehabilitation Procedures (BC MOELP 1997).	The following reference has been added to the document. BC MOELP. 1997. Fish Habitat Rehabilitation Procedures. Watershed Restoration Technical Circular No. 9. Eds. P.A. Slaney and D. Zaldokas. Watershed Restoration Program.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2295	WSC - Ancillary Authorizations	Appendix P_Offset Effectiveness Monitoring Program_2022_04_22	LWRS (Luc Turcotte)		03-Nov-22	1	New	question	No	1.1.4 Flow Augmentation in Davidson Creek is there a WSA application memo for the proposed flow augmentation in Davidson Creek written by Palmer for FWSS?	Palmer has written two memos pertaining to maintaining IFN in Davidson Creek using the FWSS (Palmer 2021, Palmer 2022). These memos will be included in the application. References: Palmer. 2021. Blackwater Fisheries Offsetting Plan Instream flow needs for Davidson Creek. Prepared for BW Gold Ltd. by Palmer. December 3, 2021. Palmer. 2022. Blackwater Fisheries Offsetting Plan Construction Phase: Temporary Minimum Flow Threshold in Davidson Creek. Prepared for BW Gold Ltd. by Palmer. February 24, 2022.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2296	WSC - Ancillary Authorizations	Appendix P_Offset Effectiveness Monitoring Program_2022_04_22	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	Table 1. Success Criteria for the Murray Creek and Greer Creek Habitat Enhancement Projects "comparable to pre restoration and/or reference site data" - consider workding and context, for the amount of work and habitat augmentation proposed I would hope for "equal to or better than". Are reference sites to be the least impacted/degraded closest to a natural state or are they to be site representing what the habitat would be before improments, such as areas with bank erosion, cattle trampeling?	The reference site locations are stream sections with fish habitat classified as good, with stable banks, and containing similar habitat components at the enhancement sites. Therefore, setting the goal for enhancement sites to be comparable to reference sites is conservative.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2296	WSC - Ancillary Authorizations	Appendix P_Offset Effectiveness Monitoring Program_2022_04_22	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Have the reference sites been selected yet? And have they been characterized and assessed for baseline condition?	Reference sites for Murray Creek and Greer Creek have been selected, with baseline conditions for the reference site on Greer Creek described in Palmer (2022). Baseline surveys at Greer Creek and Murray Creek were completed in the summer of 2022 and will be described in the 2023 Field Report. Palmer. 2022. Blackwater Gold Project Fish and and Aquatic Resources 2021 Field Survey Report. Prepared for BW Gold Ltd. by Palmer. August 2022.		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2297	WSC - Ancillary Authorizations	Water Licence Application Fresh Water Supply System	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	Referenced in text but not included in WSC application "Target IFN flows for Davidson Creek were developed by Palmer Environmental Consulting Group (Palmer) and are discussed in detail in the Fisheries Offsetting Plan (Palmer, 2021)." As this FWSS impacts aquatic habitat please add reference to WSC application.	The citation in the text has been updated to Palmer (2022) and the following reference has been added to the document: Palmer. 2022. Blackwater Gold Project Application for Authorization under Paragraph 35(2)(b) of the Fisheries Act (Non-Emergency Situations). Prepared for BW Gold by Palmer. June 20, 2022.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2298	WSC - Ancillary Authorizations	IFN_16Apr21_SG	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	are groundwater inputs to davidson creek accounted for in the IFN and SEFA model, perticualry during the winter? What is the status of the groundwater accounting imputs as a result of the change in hydrogeology flows restuling from the development of the open pit? this could influence the amount of water widthdrawls needed from Tatelkuz lake.	The SEFA modelling that was used to develop the IFN does not differentiate different sources of instream water. For example, groundwater recharge is not differentiated from surface runoff. However, groundwater was extensively examined for the baseline groundwater quantity (Appendix 5.3.5A of the Application/EIS) and the potential Project effects on groundwater (Section 5.3.5 Groundwater Quantity of the Application/EIS). Only minor, not significant residual effects in close proximity to the TSF were predicted for groundwater quantity. The impacts to groundwater dynamics in the downstream reaches of Davidson Creek are not anticipated to change. Because of this, the groundwater contributions to habitat in the downstream reaches of Davidson Creek are not expected to be affected.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing

2298	WSC - Ancillary Authorizations	IFN_16Apr21_SG	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Winter groundwater inputs seem to be an unknown, or un-quantified (Palmer 2021 - section 4.1.1) in Davidson Creek. I understand that collecting winter flow data is inherently difficult as it is hard to measure, due to winter weather and ice effect on gauged measurements. However, winter flows would primarily consist of groundwater contributions (KP 2020). Overwintering Habitat [Davidson Creek Watershed] in 2013 winter observations showed areas of "....open water. These were probably caused by groundwater inflows." (AMEC 2013. - section 5.8.1.5). Therefor as a proxy winter flows are made up of groundwater (baseflow). Stating that groundwater inputs 'supplement' winter flows is misleading in text as the winter flows are already predominantly groundwater. Section 4.1.1 mean streamflow between Dec and Mar is 0.08 m3/s, but in 3.6.1 it is suggested that median IFN flows are used, further table 3 proposes 0.08 m3/s as the IFN. For context are the suggested flows presented in table 3 - Dec 1 - Apr 15 the median stream flow (0.08 m3/s) [Palmer] and mean stream flow (0.13 m3/s) [AMEC]? If so please state in table caption or in table. If the median value is lower than the mean, how is this more conservative for winter flows - relating to available habitat and egg incubation? (IFN moving from 0.13 m3/s to 0.08 m3/s). This time of year has the potential to be a habitat bottleneck, as mentioned in section 3.6.1. I would expect conservative flows to be on high side such as the previous flow of 0.13 m3/s, please elaborate on how the newer lower flows are more conservative for this context.	Groundwater Contributions: The reviewer makes a good point about how the word 'supplement' could be misleading. In Section 4.1.1 of the IFN memo, this text is specific to flows that will provide overwintering habitat and egg incubation for Kokanee. In Davidson Creek, Kokanee are only present in reaches that are several kilometres downstream from the outlet of the freshwater reservoir (FWR), where the instream flow needs (IFN) will be met. The 'supplemental' flow refers to groundwater contributions that would occur downstream of the FWR, and are therefore not explicitly considered in the IFN. Winter IFN: Initially, AMEC (2015) defined the IFN for the entire overwintering period as the mean modelled flow during March, which is the month with the lowest-average flow. This calculation was conducted using a now-outdated baseline watershed model outputs that were derived using a 15-year timeseries of simulated streamflow that were developed to support the Environmental Assessment (EA) application. Since then, an updated watershed model has been developed that is calibrated using additional, more recent hydrometric data that simulated a 40-year timeseries instead of a 15-year timeseries. This updated watershed model (Knight Piesold 2021) predicts lower winter streamflow than its previous version did, which is the reason why the updated winter IFN value (0.08 m3/s) is lower than what was previously proposed (0.13 m3/s). However, the methodology used to derive the winter IFN value is more conservative. In the recent update (Palmer 2021), the IFN for the entire overwintering period was calculated by calculating the median flow for the entire December to March period, instead of using only data from March. Further, median flows were used to set the IFN instead of mean flows to minimize the bias introduced by months with extremely abnormal flows. AMEC. 2015. Blackwater Gold Project – Instream Flow Study. Appendix 5.1.2.6D. Prepared for New Gold Inc Knight Piesold. 2021. Blackwater Gold Project – Life of Mine Water Balance Model Report. Prepared for BW Gold Ltd. Palmer. 2021. Blackwater Fisheries Offsetting Plan. Instream flow needs for Davidson Creek. Prepared for Blackwater Gold Ltd.		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2299	WSC - Ancillary Authorizations	IFN_16Apr21_SG	LWRS (Luc Turcotte)		03-Nov-22	1	New	comment	No	has there been consideration that flow augmentation with lake water could effect the incubation time period for Kokanee eggs? A change in Accumulated Thermal Unit (ATU).	BW Gold has prepared a technical memorandum (see supporting documents - Response to Information Requests #48 and #50 - Temperature Memo, Palmer 2022) comparing measured temperatures in the Davidson Creek Watershed with modelled mean daily temperature data during flow augmentation. This memorandum is provided in support of the evaluation of the temperature regime in Davidson Creek. Section 4 of this memo compares the baseline temperture regime with the modelled temperature data for site ST-14 in lower Davidson Creek (i.e., the Kokanee spawning and egg incubation area) under various flow augmentation operational scenarios. The results of this comparison show that surface water will closely correspond to natural conditions and groundwater temperatures where spawning occurs will be unchanged. In addition to the model-based approach to evaluating temperature, The federal CEAA Decision Statement Condition 3.14 Follow-up Program requires ongoing monitoring of temperature at multiple sites in Davidson Creek and calculation of ATU to evaluate the accuracy of model predictions and drive adaptive management of the Freshwater Supply System (FWSS) flow augmentation system if necessary.		LWRS (Luc Turcotte)	Palmer					TD, Nov 21	Ready for Publishing
2299	WSC - Ancillary Authorizations	IFN_16Apr21_SG	LWRS (Luc Turcotte)		09-Dec-22	2	Follow Up	comment	No	Thank you for the reference to the technical memo. Is there a management plan that explains how the water will be blended to meet background/ and or approved temperatures, taking the next step of modelled scenarios and putting them into practice? Has a decision been made on using baseline temperature data or optimal temperature data? This question was discussed at a meeting in the August where parts of this memo where presented.	The 'Mine Site Water and Discharge Monitoring and Management Plan', which is included as Appendix 9-E of the Application, describes the function of the Fresh Water Reservoir (FWR), including how it releases water to meet temperature targets. Baseline water temperatures will be used as the target range for release to Davidson Creek. As per the email from EAO received on 12 August 2022, since baseline temperatures are already outside optimum ranges for specific fish species in Davidson Creek and not caused by the Project, there is no trigger for EAC Condition 26 requiring a site-based environmental benchmark (SBEB).		LWRS (Luc Turcotte)	Palmer					TD, Dec 19	Ready for Publishing
2300	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	1	New	Information Requirement	No	Identify the scope of work included under 'Annual Geotechnical Inspections' including, but not limited to, the types and number of facilities. [Information Requirement]	The scope of work included in the Annual Geotechnical inspections is listed in Section 6.5 of the RLCE Memo, including the facilities. The scope of work and full list of facilities may vary and would be confirmed prior to any inspection.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2300	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement	No	(a)Section 6.5 of the RLCE Memo indicates the 'Geotechnical DSIs and DSRs' will include 'WRS stability'; clearly indicate where the costing information is located including page/paragraph number and spreadsheet title, line and column reference. [Information Requirement] (b)Section 6.5 of the RLCE Memo does not include TSF D Pond beach cover integrity in the list of mine infrastructure involved in the 'Geotechnical DSIs and DSRs'. Please indicate if the TSF D Pond beach cover integrity is included in the scope and costing of the 'Geotechnical DSIs and DSRs' and clearly indicate where the costing information is located including spreadsheet title, line and column reference. If the TSF D Pond beach cover integrity is not included, provide justification. [Clarification, Information Requirement]	a) The costing information which is applied to WRS stability as part of the DSI and DSR program is found in T-4 Monitoring under the categories listed in cell D8 and D18. BW Gold further clarifies that the reference to WRS stability review is listed as bullet 8 in the RLCE Memo Section 6.5, as a facility requiring review during DSI and DSR. b) BW Gold has included "TSF C Pond beach cover integrity" in the list of components for DSI and DSR review as listed under Section 6.5, p 21 of 31; Bullet 2. BW Gold will amend the reference to include TSF D Pond beach cover integrity. Costing is provided in worksheets T-4 Monitoring under categories listed in cell D8 and D18, with specific inclusion of a TSF cover maintenance allowance in Row 22.		EMLI (S.Morse, A.McPherson)	ERM						
2301	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	1	New	Information Requirement/Clarification	No	The cost estimate provided for closure and post-closure of the Tailings Storage Facility (TSF) does not include the following: •TSF C permanent spillway; oInclusive of all costs including, but not limited to, design, construction, and reporting •On-site supervision and verification of reclamation activities, as directed by EoR; •Maintenance of TSF related infrastructure (i.e. spillway, ditches, etc.); •Closure and post closure site investigations;	The RLCE Memo and spreadsheet have been updated to ensure completeness of the reviewers comments and information needs. Artemis contends that the recommendations from DSIs, DSRs, and ITBR are not yet known as these activities have yet to occur. The Contingency amount as listed in the Summary cost spreadsheet, will be applied to implmentation of recommendations during Post-Closure.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2301	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement/Comment	No	EMLI Round 2 Comment: a)EMLI geotechnical reviewers cannot locate a description or cost estimate for 'on-site supervision and verification of reclamation activities, as directed by the EoR'. Provide this information and clearly indicate where it is located including page/paragraph number and spreadsheet title, line and column reference. The estimate provided should include, but is not limited to, studies and development of procedures for safe access to the TSF surface for cover construction including any plans, designs, trials and monitoring requirements; cover construction QA/QC; As-built reports including verification the cover has been constructed consistent with the design and specification and is suitable for it's intended use, as required. [Information Requirement]	a) BW Gold has incorporated the allowance for "on-site supervision and verification of reclamation activities", reference T-5 Mine Maintenance Row 17 - 25. Additionally, App 1b Soil-Overburden Rehandle Item 1b.3.19 includes allowance for Environmental Design Engineers/QPs (including EoR) to supervise and verify soil/overburden rehandle; Listed under the Personnel category commencing Row 36. Various QPs will be required at various times on site, the estimate is a cumulative total of time at an average QP rate to undertake a variety of tasks as listed in the reviewer's comment. Section 6.5 of the RLCE Memo has added additional discussion detail to clarify BW Gold costed approach. b) Comment noted. c) The RLCE cost estimate allocation for the tasks identified by the reviewer are included in T-5 Mine		EMLI (S.Morse, A.McPherson)	ERM		Rolf				

2302	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	1	New	Information Requirement	No	The cost estimate provided for closure and post-closure of the Lower Waste Stockpile (LWS) and LWS Sediment Pond Dam does not include the following •Onsite supervision and verification of reclamation activities, as directed by design engineer; •Maintenance of LWS related infrastructure (i.e. pond and dam, spillway, ditches, etc.); •Closure and post closure site investigations, as required; •On site and consultant monitoring and reporting, including instrumentation installation and OMS manual updates/revision; •Annual LWS performance reviews; •Annual LWS Sediment Pond Dam DSIs; •LWS Sediment Pond Dam DSRs; and •Implementation of recommendations from annual performance reviews, DSIs, and DSRs including updates, studies and/or assessments. Please provide responses and cost estimates for the items identified above and others, as required. As per the 'Major Mine Reclamation Security Policy', the cost estimate must be based on an estimate provided by an engineering firm(s) to complete the activities indicated or costs from similar activities that have recently been completed. [Information Requirement]	"The updated Cost spreadsheets include the additional information as requested by the reviewer. Artemis notes that the recommendations from annual performance reviews and the cost of their implementation are not yet known; during Operations this will be a capital expenditure; during Post-Closure the future undefined costs will be covered from the Contingency component of the Bond. The location of the information can be found by referencing the comment response concordance table attached to the RLCE Memo."		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2302	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement	No	EMLI geotechnical reviewers cannot locate a description or cost estimate for the following: •Onsite supervision and verification of reclamation activities, as directed by design engineer; •Maintenance of LWS and UWS related infrastructure (i.e. pond and dam, spillway, ditches, etc.); •Closure and post closure site investigations, as required; •Monitoring and reporting, including OMS manual updates/revision, by site staff and consultants; •Annual LWS and UWS performance reviews; •Annual LWS Sediment Pond Dam DSIs; and •LWS Sediment Pond Dam DSRs. Provide this information and clearly indicate where it is located including page/paragraph number and spreadsheet title, line and column reference.	- Onsite supervision and verification of reclamation activities: BW Gold has included Mine Monitoring and Maintenance personnel in T-5 Mine Maintenance, with an annual salary allowance of $705,000 to be allocated to different skill levels of personnel as listed, but to include Senior personnel, QP, EoR, Skilled Labourers / Technicians; Indigenous support personnel. This personnel will be responsible for supervision and verification of reclamation activities. Additional costs are included in App 10b SCP Reclamation Costs (Item 10b.3.19) and App 14a LGO Rehandle (Y+3 only, Item 14a.3.21) for 2 x Environmental Design engineers to supervise and monitor reclamation activities. - Maintenance of LWS and UWS related infrastructure: As indicated above, BW Gold has included Mine Monitoring and Maintenance personnel in T-5 Mine Maintenance, with an annual salary allowance of $705,000 to be allocated to different skill levels of personnel as listed, but to include Senior personnel, QP, EoR, Skilled Labourers / Technicians; Indigenous support personnel. These personnel will be responsible for supervision and verification of reclamation activities. - Closure and post closure site investigations: BW Gold has provided an estimate for site investigations under App 9, Item 9.2 - Monitoring and reporting, including OMS manual updates, Annual LWS and UWS performance reviews, Annual LWS Sediment Pond Dam DSIs and DSRs: T-4 Monitoring (Cells B8, Geotechnical Stability Program) includes the cost estimate for DSI and DSR reviews as described in Section 6.5 of the RLCE Memo. The list of DSI and DSR components and tasks listed in Section 6.5 are not intended to represent the Terms of Reference for undertaking these reviews; we fully anticipate that annual WS reviews (stockpile performance, sediment pond and dams) will be part of the review. The RLCE Memo Section 6.5 has been revised to include the reviewers requirement.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2303	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	1	New	Information Requirement	No	The cost estimate provided for closure and post-closure of the Low Grade Ore (LGO) and Topsoil (TS) Stockpiles do not include the following: •Onsite supervision and verification of reclamation activities, as directed by design engineer; and •Decommissioning TS Stockpiles ponds and dams. Please provide responses and cost estimates for the items identified above and others, as required. As per the 'Major Mine Reclamation Security Policy', the cost estimate must be based on an estimate provided by an engineering firm(s) to complete the activities indicated or costs from similar activities that have recently been completed. [Information Requirement]	The updated cost spreadsheets include the informatio requested by the Reviewer. The location of the information can be found by referencing the comment concordance table attached to the RLCE memo.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2303	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement	No	EMLI geotechnical reviewers cannot locate a description or cost estimate for 'onsite supervision and verification of reclamation activities, as directed by design engineer' or 'decommissioning of TS Stockpile ponds and dams' for TS Stockpile Sediment Control Ponds 1, 3, 4A and 5. Provide this information and clearly indicate where this it is located including page number/paragraph and spreadsheet title, line and column reference. [Information Requirement]	See ID#2302 response. In addition, BW Gold has included TS Stockpile pond and dam decommissioning in App 10b - SCP Reclamation Costs and App 10c - SCP Inputs. Verification and supervision of reclamation activities will be carried out by onsite Environmental Design Engineers, App 10b - SCP Reclamation Costs, Item 10b.3.19. Please note an allowance for reclamation of SCPs for all TS stockpiles has been made as detailed in App 10c - SCP Inputs. Detailed designs have only been completed for TS-2 and TS-4B. Remaining stockpiles have been estimated with appropriate adjustments based on these designs		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2304	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	1	New	Comment	No	Many of the comments for the 'LoM BW Closure Estimate' are similar to those provided above for the 'Y+3 BW Closure Estimate'. Please cross reference comment responses as/if required.[Comment]	BW Gold acknowledges the comment.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2305	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Nov 03, 2022	1	New	Information Requirement	No	Identify the scope of work included under 'Annual Geotechnical Inspections'. [Information Requirement]	Please see response to ID# 2300. BW Gold has provided additional minor amendments to the list of tasks and reviewable mine features in the RLCE Memo Section 6.5.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2305	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement	No	(a)Section 6.5 of the RLCE Memo indicates the 'Geotechnical DSIs and DSRs' will include 'WRS stability'; clearly indicate where the costing information is located including page/paragraph number and spreadsheet title, line and column reference. [Information Requirement] (b)Section 6.5 of the RLCE Memo does not include TSF D Pond beach cover integrity in the list of mine infrastructure involved in the 'Geotechnical DSIs and DSRs'. Please indicate if the TSF D Pond beach cover integrity is included in the scope and costing of the 'Geotechnical DSIs and DSRs' and clearly indicate where the costing information is located including spreadsheet title, line and column reference. If the TSF D Pond beach cover integrity is not included, provide justification. [Clarification, Information Requirement]	Please see response to ID# 2300.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				

2306	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		03-Nov-22	1	New	Information Requirement	No	The cost estimate provided for closure and post-closure of the Tailings Storage Facility (TSF) does not include the following: •On-site supervision and verification of reclamation activities, as directed by EoR; •Maintenance of TSF related infrastructure (i.e. spillway, ditches, etc.); •Closure and post closure site investigations; •On site and consultant (EoR or other) monitoring and reporting, including instrumentation installation, instrumentation maintenance and upgrades, and other engineering support; and •Implementation of recommendations from DSIs, DSRs and the ITBR including updates, studies and/or assessments (i.e. detailed closure design updated, Dam Breach and Inundation studies, etc.). Please provide responses and cost estimates for the items identified above and others, as required. As per the 'Major Mine Reclamation Security Policy'2, the cost estimate must be based on an estimate provided by an engineering firm(s) to complete the activities indicated or costs from similar activities that have recently been completed. [Information Requirement]	Please see response to ID#2301 and parts of ID#2302. Instrumentation installation and site investigation costs are included in App 9 Instrumentation. The cost of implementing recommendations from DSIs, DSRs, and the ITRB cannot be known at this time. The RLCE Memo Section 6.8 includes costs of implementing ITRB recmmendations in the Contingency amount. Similarily Post-Closure cost to implement DSI and DSR recommendations, if not addressed through Mine Maintenance, can be covered through Contingency. Each 5 year mine plan update would review and if necessary re-establish the required Contingency amount.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2306	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement/Comment	No	EMLI Round 2 Comment: a)EMLI geotechnical reviewers cannot locate a description or cost estimate for 'on-site supervision and verification of reclamation activities, as directed by the EoR'. Provide this information and clearly indicate where it is located including page/paragraph number and spreadsheet title, line and column reference. The estimate provided should include, but is not limited to, studies and development of procedures for safe access to the TSF surface for cover construction including any plans, designs, trials and monitoring requirements; cover construction QA/QC; As-built reports including verification the cover has been constructed consistent with the design and specification and is suitable for it's intended use, as required. [Information Requirement] b)EMLI geotechnical reviewers note that the RLCE Memo indicates 'loading and transport of reclamation material is done by large volume loaders'. It is EMLI's expectation that suitably sized equipment has been selected for placement of material at the TSFs, sediment ponds, etc. in consideration of the anticipated ground conditions (i.e. construction on soft ground). [Comment] c)EMLI geotechnical reviewers cannot locate costing for the 'maintenance of TSF related infrastructure (i.e. spillway, ditches, etc.)' Provide this information and clearly indicate where it is located including page/paragraph number and spreadsheet title, line and column reference. [Information Requirement]	Please see response to ID#2301.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2307	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		03-Nov-22	1	New	Information Requirement	No	The cost estimate provided for closure and post-closure of the Lower Waste Stockpile (LWS) and Upper Waste Stockpile (UWS) does not include the following: •Onsite supervision and verification of reclamation activities, as directed by design engineer; •Maintenance of LWS and UWS related infrastructure (i.e. pond and dam, spillways, ditches, etc.); •Closure and post closure site investigations, as required; •On site and consultant monitoring and reporting, including instrumentation installation and OMS manual updates/revision; •Annual LWS performance reviews; •Annual LWS and UWS Sediment Pond Dam DSIs; •LWS and UWS Sediment Pond Dam DSRs; and •Implementation of recommendations from annual performance reviews, DSIs, and DSRs including updates, studies and/or assessments. Please provide responses and cost estimates for the items identified above and others, as required. As per the 'Major Mine Reclamation Security Policy', the cost estimate must be based on an estimate provided by an engineering firm(s) to complete the activities indicated or costs from similar activities that have recently been completed. [Information Requirement]	Please see response to ID#2302 and ID#2303.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2307	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement	No	EMLI geotechnical reviewers cannot locate a description or cost estimate for the following: •Onsite supervision and verification of reclamation activities, as directed by design engineer; •Maintenance of LWS and UWS related infrastructure (i.e. pond and dam, spillway, ditches, etc.); •Closure and post closure site investigations, as required; •Monitoring and reporting, including OMS manual updates/revision, by site staff and consultants; •Annual LWS and UWS performance reviews; •Annual LWS Sediment Pond Dam DSIs; and •LWS Sediment Pond Dam DSRs. Provide this information and clearly indicate where it is located including page/paragraph number and spreadsheet title, line and column reference.	Please see response to ID#2302.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2308	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		03-Nov-22	1	New	Information Requirement	No	The cost estimate provided for closure and post-closure of the Low Grade Ore (LGO) and Topsoil (TS) Stockpiles do not include the following: •Onsite supervision and verification of reclamation activities, as directed by design engineer; and •Decommissioning TS Stockpiles ponds and dams. Please provide responses and cost estimates for the items identified above and others, as required. As per the 'Major Mine Reclamation Security Policy', the cost estimate must be based on an estimate provided by an engineering firm(s) to complete the activities indicated or costs from similar activities that have recently been completed. [Information Requirement]	Please see response to ID#2303.		EMLI (Mohammad Vahedifar)	ERM		Rolf				
2308	-246 Blackwater Major Works Application – Reclamation Security Cost Estimate	ITT ID #226 Memo J.6 Y LoM BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	2	Follow up	Information Requirement	No	EMLI geotechnical reviewers cannot locate a description or cost estimate for 'onsite supervision and verification of reclamation activities, as directed by design engineer' or 'decommissioning of TS Stockpile ponds and dams' for TS Stockpile Sediment Control Ponds 1, 3, 4A and 5. Provide this information and clearly indicate where this it is located including page number/paragraph and spreadsheet title, line and column reference. [Information Requirement]	Please see response to ID#2303.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				

2309	Major Works Application - Post-closure water treatment	ENV comment IDs 2237-2240	BC ENV (Erin Rainey)		16-Nov-22	1	New		No	Below are my initial comments on the attached draft report by BQE regarding post-closure water treatment in response to ENV comment IDs 2237-2240. Please pass these onto Artemis for consideration in the final report. •The proposal of metals treatment in post-closure for treating open pit supernatant is new; •Please clarify if metals treatment in post-closure will be required in perpetuity? •Where is the sludge from metals treatment proposed to be disposed of in post-closure? •The ENV information request relates to all parameters of concerns (POCs) in closure/post-closure that may require treatment prior to discharge, not just sodium sulphate. Therefore, the statements that treatment is not required in perpetuity are misleading as it appears metals treatment of open pit supernatant is still required in post-closure, beyond the initial 100 years. •The proposed water management scenario to dilute the open pit supernatant prior to discharge to Davidson Creek with 'low sulphate content' site water is new; more information will be required to confirm that this is a feasible discharge scenario without the need for treatment. •Where are the solid by-products from precipitating the left-over sulphate proposed to be disposed of in post-closure? •Where on the mine site (e.g., TSF spillway?) is the blending of open pit supernatant and site 'clean' water assumed to occur prior to discharge to Davidson Creek? •There are references to nanofiltration as the base-case membrane separation treatment in post-closure, not reverse osmosis as assumed in the updated water quality modelling (v13e). Please clarify which type of membrane separation technology is being proposed for the project in post-closure.	Please see "R5_EMLI Comment 411c_Near Term Evaluations_Responses.pdf"		BC ENV (Erin Rainey)	BQE					RT; nov 21	Ready for Publishing
2310	Major Works Application - Operating Plan	ENV comment IDs 2090 and 2091	BC ENV (Breanne Hill)		28-Nov-22	1	New		No	Here are a few additional comments on the Operating Plan: •Table 2-2 indicates a daily average flow of 138 m3/day which is different from R1-BC ENV_Comment ID 1 which states that it is 102 m3/day. Please indicate what flow is correct and also include the maximum daily flow in the Table 2-2 •Section 2.2 states that there are five septic tanks that will be used prior to the effluent being received at the influent pumping station. Include maintenance requirements and pumping for the five septic tanks and information required under Section 39, and 62 of the MWR. •The percolation rate information in the Section titled Septic Field Capacity is confusing. First it states that there is a percolation rate of 2 minute/25 mm and then it states that a hydraulic capacity review was completed in 2013 that observed percolation rates between 5 and 15 minutes/25 mm. Please indicate which percolation rate is correct and why.	*The daily average flow of 138 m3/day corresponds to current estimates for wastewater coming from the construction and later operations camp and process area, for a total population of 450-person. This value has been used for the design of the WWTP as presented in the Operating Plan document. A flow rate of 102 m3/day has been considered at some point as the expected daily flow, but it has not been considered in the current design. The maximum daily flow expected for the WWTP is included in the Table 2-2 as "Peak Dry Weather Flow" and has been used in the WWTP design (in combination with the daily average flow). No other maximum values are considered. *Section 2.2.6 maintenance of septic tanks was added to Include maintenance requirements and pumping for the five septic tanks and information required under Section 39, and 62 of the MWR. *Section 2.2.4 was updated with additional clarifications to differentiate the percolation rate design from the percolation rate performance testing. Please see revised attachment 'R2-3_ENV_Comment IDs 2190, 2191, 2192, 2195, 2200, 2201, 2204, 2310.pdf'		BC ENV (Breanne Hill)	BWG					TD, Dec 8	Ready for Publishing
2311	Reclamation Liability Cost Estimate (RLCE)	Water Treatment /Management Needs in Post-Closure	CSFN (F. Mohamm)		12-Dec-22	1	New	Recommended Permit Condition	Yes	As discussed in length in comment ITT ID 490, the long-term status of the pit lake is unclear at this point. The updated water management/treatment scheme (V13e) clearly results in the concentration of contaminants in the open pit up to the point that the proposed infrastructure cannot ensure management/treatment of water and exceedances are eventually expected, regardless of the timeline. The solutions and path forward proposed to this point by BW Gold do not present a meaningful way of addressing this issue in the long run and most likely require additional water treatment capacity and schemes in the long term to ensure the receiving environment targets can be met. These costs and liabilities are significant and must be accounted for in the RLCE, none of which is possible unless the issues discussed in comment ITT ID 490 are addressed and resolved. Recommended Permit Condition: The Reclamation and Closure Plan must be updated upon conclusion of water management/treatment practices for Post-Closure that the pit lake is in a state of equilibrium and concentration of contaminants can be met in the receiving environment regardless of the timespan considered.	BW Gold appreciates the further comment from the reviewer continuing to clarify and explain the concerns with regard to the water management and water treatment of the pit lake water in the Post-closure phase of the mine. BW Gold anticipates that the Mines Act permit will contain conditions related to the Reclamation and Closure plan, including scheduled updates and required content of the plan. The reviewer's recommendation is available for EMLI to consider.		CSFN (F. Mohamm)	ERM		Rolf			TD, Dec 19	Ready for Publishing
2311	Reclamation Liability Cost Estimate (RLCE)	Water Treatment /Management Needs in Post-Closure	CSFN (F. Mohamm)		12-Jan-23	2	New	Recommended Permit Condition	Yes	Status - CSFNs met with Artemis and Lorax on December 19, 2022. Based on this meeting, a follow-up to comment 490 has been provided above. In order for this reclamation and closure comment to be considered resolved, the cost estimate must take into account the recommendations required to resolve comment 490.			CSFN (F. Mohamm)	ERM		Rolf				
2312	Reclamation Liability Cost Estimate (RLCE)	Estimates of Disturbed area for TSF C and TSF D	CSFN (F. Mohamm)		12-Dec-22	1	New	Information Requirement	No	The combined disturbed area for TSF C and TSF D has increased by ~170 ha in comparison to the previous version of the RLCE. Specifically, the disturbed area by TSF D has increased by 50%, from 241.6 ha to 358.7 ha. This significant change is not expected especially considering that the mine plan and infrastructure have not changed materially since the previous version of the RLCE. Information request: Please explain the discrepancy in TSF disturbed area between the previous version and the latest version of the RLCE and clearly discuss any changes in the operational plans that resulted in a significantly larger estimate of the disturbed area in TSF C and D.	The disturbed area of the TSF C and D in the RLCEs refer to the TSF C and D tailings areas. The area of the tailings areas are dependent upon the filling of the pond. Changes in the area of the TSF tailings areas are dependent upon the water balance. There has been no change to the overall area of the TSFs. TSF C and D areas have been re-calculated based on the updated filling rates for the TSF C and D ponds. The area of the The updated values for the J.7 RLCEs are; Y+3 TSF C = 51.3 ha, and Y+23 TSF C = 591 ha and TSF D = 233.9 ha. As per Section The reclamation area is modified for some treatments by a 10 m buffer with the edge of pond which is dominated by wetter ecosystems; Y+3 TSF C = 0.6 ha, and Y+23 TSF C = 2.3 ha and TSF D = 2.2 ha.		CSFN (F. Mohamm)	ERM		Rolf			TD, Dec 19	Ready for Publishing
2313	Reclamation Liability Cost Estimate (RLCE)	Placement of Cover Material in the TSF	CSFN (F. Mohamm)		12-Dec-22	1	New	Information Requirement	No	The estimated costs associated with movement and placement of reclamation material do not reflect the requirements identified in the Application. It appears that the volumetric estimates (and cost of moving it) for coverage of TSFs includes a 70 cm growth media cover, but not the underlying 30 cm layer as indicated in the Application. In Source's estimate, this is about an additional 2.5 Mm3 of OVB (~ 6M cost of moving from the LWSP to the final reclamation location) that is currently excluded from the liability estimate. Information Request: Please explain how the RLCE represents the cover requirements identified in the Application. If the necessary depth of cover has not been accounted for, please update the RLCE to include the correct values.	The TSF cover has been re-calculated on the J.7 RLCE sheets based on the areas in Comment #2313 with a cover of 0.3 m of NAG, 0.7 m of OVB, and 0.3 m of surficial materials as per Section 4.7.4.1. The updated volume of NAG/OVB covering for TSF C and D is 5.9 Mm3 and 2.3 Mm3, respectively, for a total of 8.2 Mm3 for Y+23, and 0.35 Mm3 for Y+3.		CSFN (F. Mohamm)	ERM		Rolf			TD, Dec 19	Ready for Publishing
2314	Reclamation Liability Cost Estimate (RLCE)	Fuel cost	CSFN (G. Hamilton)		12-Dec-22	1	New	Information Requirement	No	It is understood that the average fuel cost of $1.25 per liter (Cell E10, sheet App 2 Soil_OB Rehandle) over the past 18 months was used as the fuel cost for bonding purposes. Fuel costs were abnormally low during the pandemic. Recommendation: An average fuel cost from the past 6 months ($1.75 to $2.00 per liter) may be more realistic for planning and bonding purposes.	The $1.25/l is based on the average rack rate out of PG from Jan 2021 to July 2022 and includes freight to site and applicable taxes less a volume discount based on discussion with potential suppliers. An average rate was chosen in order to remove any seasonal variations and pricing abnormailities. Note, current rack rates out of Prince George are around 1.37/l (21 Dec 2022) compared to a peak of 1.83/l in June 2022. For the most part, fuel pricing is a variable input into the various Apps and can be adjusted		CSFN (G. Hamilton)	ERM		Rolf			TD, Dec 19	Ready for Publishing

2315	Reclamation Liability Cost Estimate (RLCE)	Pumping Costs – Post-Closure	CSFN (G. Hamilton)		12-Dec-22	1	New	Recommendation	No	During Post-Closure, "the Pit Lake will be maintained as a groundwater sink to mitigate potential seepage from entering Davidson Creek and Creek 661 via TSF C pond and TSF Spillway." The final embankment elevation for Main Dam C is 1353 and the TFS C pond elevation at the End of Mine is 1344. The Pit crest at its lowest elevation is approximately 1475. In order to maintain the Pit Lake as a groundwater sink to mitigate potential seepage from entering Davidson Creek and Creek 661 via TSF C pond and the TSF spillway, the elevation in the Pit Lake must be maintained well below the elevation of 1344 masl. The head difference between the Pit crest at its lowest elevation and TFS Pond C is 131 meters. From Cell G37, tab 'App 7 Pumping Cost', there is a 50 m head from the Open Pit to the WTP. Recommendation: A head of 150 meters would be more realistic for the design of a pumping system and project bonding.	Please see the response to Comment ID#2244. The recommended depth to maintaint the pit lake in Post-Closure is approximately 40 m below the lowest crest elevation, not 150 m below. This is the estimated water level depth that would maintain the pit as a groundwater sink with an inward flow of groundwater around the pit permiter.		CSFN (G. Hamilton)	ERM		Rolf			TD, Dec 19	Ready for Publishing
2316	Reclamation Liability Cost Estimate (RLCE)	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	1	New	QP Response Required	No	Provide the Cost Estimate Classification System and Cost Estimate Class(es) and/or expected accuracy range used to prepare the reclamation security cost estimates provided.	The AACE International (18R-97: Cost Estimate Classification System - As Applied in Engineering, Procurement, and Construction for the Process Industries), August 7, 2020 was used to prepare and reference the cost estimates. BW Gold has clarified the Estimate Class in accordance with this system (per Section 3, p 4 of the System reference) for each of the worksheets for each of the Y+3 and LoM scenarios). https://web.aacei.org/docs/default-source/toc/toc_18r-97.pdf?sfvrsn=4 BW Gold has provided "R2_EMLI_Comment ID 2316.pdf" to close this response which has been prepared by the QP estimators.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2317	Reclamation Liability Cost Estimate (RLCE)	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	1	New	Potential Permit Condition	Yes	Submission of a Basis of Estimate (BOE) report with meets current standards of practice is anticipated to be a permit condition. In addition to the information provided in the RLCE Memo and Major Mine Reclamation Security Policy, the BOE report must include, but not be limited to, the Cost Estimate Classification System and Cost Estimate Class(es) and expected accuracy range of the cost estimate. [Potential Permit Condition]	BW Gold acknowledges the reviewer's information needs and commits to providing a Basis of Estimate (BoE) Report summarizing the Cost Estimate Classification System, classes, and its application to the RLCE.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				
2318	Reclamation Liability Cost Estimate (RLCE)	ITT ID #226 Memo J.6 Y+3 BW Closure Estimate	EMLI (S.Morse, A.McPherson)		Dec 16, 2022	1	New	Information Request	No	The reclamation security cost estimate has been provided in several revisions of cost estimate spreadsheets and supporting documents; many documents are superseded. Provide change log(s), or another method of documentation, to clearly indicate where changes to cost estimate spreadsheets and/or supporting documents have been made for all subsequent cost estimate spreadsheets and supporting documents.	BW Gold has included a change log as worksheet ahead of the Summary sheet for each of the Y+3 and LoM scenario RLCE.		EMLI (S.Morse, A.McPherson)	ERM		Rolf				

Exhibit 2
Construction Environmental Management Plan (ITT)

Round 1 Comments
Round 2 Comments
Round 3 Comments

Blackwater Gold Project – CEMP Comment Tracking Table											
ADMIN	COMMENTS										
ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Revised Section or Page	Comment Theme	Comment	Response	Author
1	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 1.3	1.3	"This CEMP does not consider mitigation measures associated with the alignment, siting, or materials associated with the transmission line..."	Add: Please reference the standalone CEMP that discusses environmental mitigation measures associated with T-Line works. What do engineering drawings have to do with environmental management during construction works?	The following statement has been deleted from the plan 'This CEMP does not consider mitigation measures associated with the alignment, siting, or materials associated with the transmission line; those relevant mitigation measures were considered during detailed engineering design of that system and are outside the scope of this document. The following statements are included in the Purpose and Objectives: 'The mitigation measures in the CEMP apply to on- and off-site infrastructure (airstrip and associated access road, transmission line and freshwater supply system). In addition, standalone CEMPs will be prepared and implemented for each off-site component. The Surface Erosion Prevention and Sediment Control Plan (Appendix 9-A; KP 2021) is intended to be implemented in conjunction with this CEMP."	ERM
1	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 1.3	1.3		The following statements are included in the Purpose and Objectives: 'The mitigation measures in the CEMP apply to on- and off-site infrastructure (airstrip and associated access road, transmission line and freshwater supply system). This statement is not included in the Purpose and Objectives section.	The Purpose and Objectives section (Section 2) has been revised as follows: "Standalone construction environmental management plans will be developed for specific components in conjunction with Issued for Construction plans and the construction execution plan." A standalone CEMP is being prepared for the transmission line to support the License of Occupation application and will be made available for review prior to submission of that application.	
1	04-Apr-22	Indigenous Communities		LDN/UFN	Section 1.3	Section 1.3	1.3		Resolved		
2	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 2.21	3.2.1	"Construction of the Project triggers a number of relevant Federal legislation and regulations"	Clarify: What is meant by "triggers"? Consider using "relevant federal legislation". "... which this CEMP and supporting management plans account for but are not limited to. These include:"	The introduction to the section regarding federal Legislation has been revised as follows: "Federal legislation applicable to the CEMP includes: etc."	ERM
2	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 2.21	3.2.1		Resolved		
3	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 3-1	15	Environmental Monitor (EM)	Clarify: Does the CEMP have a section on monitoring frequency? When monitors are required full-time (e.g., instream works) versus periodically for low-risk activities.	The following has been added to the introduction to Section 15: "At a minimum, there will be one full-time Environmental Monitor on site during construction. The Environmental Monitor will focus on site-wide construction monitoring activities in accordance with the CEMP. The frequency of monitoring would be based on the level of risk. For example, the Environmental Monitor will monitor high-risk activities, such as watercourse crossings, at an hourly/daily frequency during the activity. Lower-risk activities, such as gravel placement for a roadway, would be subject to weekly monitoring. The EM (Environmental Manager) will work with the Environmental Monitor to determine daily and weekly monitoring priorities based on construction activities. The Environmental Monitor will be supported by subject matter experts, as required."	ERM
3	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 3-1	15		Resolved		
4	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 6	7	Risk Management Approach	Edit: "when valued ecosystem components (e.g., wildlife, fish, etc.) are not susceptible to adverse effects" They still are susceptible, just less so. Please edit to reflect this.	The sentence has been removed from the final version of this CEMP.	ERM
4	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 6	7		Resolved		
5	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 6.1-1	Table 7.1-1	Red-listed Ecosystems/Wetlands	Edit: "Monitor" is more appropriate than "observe" in regard to protecting riparian zones.	Riparian monitoring is presented in Section 15.7.6, where "Monitor" has been replaced with "Observe".	ERM
5	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 6.1-1	Table 7.1-1		Resolved		
6	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 6.2	15	-	Add: Please make note of or reference monitoring frequency with respect to different types of activities.	The general frequency approach (based on the level of risk) is now presented in the introduction of Section 15. More specific monitoring frequency (e.g., weekly, monthly) for each value component are presented in 15.1 to	ERM
6	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 6.2	15		Resolved		
7	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 7	Various	"Wildlife Management Plan"	Edit: This document mentions a Wildlife Management Plan, Wildlife Monitoring and Mitigation Plan, Wildlife Management and Monitoring, and a Wildlife Monitoring and Management Plan. Are they all different documents?	All references are referring to the "Wildlife Mitigation and Monitoring Plan (Appendix 9-H)." References have been revised to refer to this plan.	ERM
7	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 7	Various		Resolved		
8	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8	Section 9		Add: Standalone management plans should be referenced throughout this section, where applicable (e.g., (Appendix X, Section X), if only for the Cateorgies.	References have been added.	ERM
8	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8	Section 9		Resolved		
9	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Site Tidiness ... once the Early Works are complete."	Clarify: What about during the Early Works?	Reference to Early Works removed as CEMP already approved for Early Works and now reads: "Keep work areas clean, tidy and organized and left in good condition."	ERM
9	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
10	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Site Tidiness - No stockpiling construction materials below the ordinary..."	Edit: Generally, materials are stockpiled well away from the OHWM to reduce the likelihood of sedimentation, etc. -- should be the distance of your riparian buffer.	The mitigation measure in Table 9.1-1 has been revised as follows "Construction materials will not be stockpiled within 30 m of the ordinary high water mark of a waterbody."	ERM
10	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Mitigation measure instead reads "Construction materials vulnerable to erosion will not be stockpiled within 30m of the OHWM of a waterbody" This does not address the concern. No materials are to be stockpiled witin 30 m of the OHWM, regardless of vulnerability.	This mitigation measure has been revised as follows to include a reference to the riparian management area (RMA) (Table 9.1-1, Site Tidiness) : "Construction material will not be stockpiled within a Riparian Management Area (RMA), in accordance with the Riparian Area Standard Operating Procedure."	
10	04-Apr-22	Indigenous Communities		LDN/UFN	CEMP	Table 9-1	Table 9-1		Resolved		
11	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Waste Management - Collect and dispose of hazardous waste offsite."	Clarify: How will it be collected?	This mitigation measure in Table 9.1-1 has been revised to "Collect and dispose of hazardous waste offsite in accordance (CMSTHP, section 8.4 Transfer Offsite)."	ERM
11	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
12	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Edit: Please collapse all lists inside this table to a single cell instead of seperating the points individually.	Bulleted lists in Table 9.1-1 have been put into single cells.	ERM
12	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
13	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Traffic and Site Access (cont'd) - Use an environmental incident report..."	Add: Provide reference to the blank Environmental Incident Report Form in an appendix.	An Environmental Incident Report Form has not been appended to the CEMP because this would require an update to CEMP every time the form is edited as well as an external review of the CEMP. BW Gold is willing to provide a draft incident response form under separate cover at the Nations request for information purposes only.	ERM
13	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Appendix G		Please provide a draft incident response form under a separate cover for review.	A draft Environment Incident Report and Wildlife Incident Report form has been provided as Appendix H and Appendix I, respectively for information purposes only. A current version of the form will be available onsite.	
13	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8-1	Appendices H and I			Resolved		

Blackwater Gold Project – CEMP Comment Tracking Table											
ADMIN	COMMENTS										
ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Revised Section or Page	Comment Theme	Comment	Response	Author
14	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Equipment Use - Maintain equipment in good working condition, on a regular basis replace worn parts, lubricate as required."	Clarify: Unclear, please reword this sentence.	Revised mitigation measure to the following: "Maintain equipment in good working condition in accordance with manufacturer's recommendations."	ERM
14	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
15	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Equipment Use - Mobile equipment must arrive on site clean and free of all material, debris, and vegetation, or be cleaned in a designated location."	Add: Reference appropriate MPs, including Invasive Plants Management Plan.	References to relevant MPs have been included throughout Table 9.1-1.	ERM
15	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
16	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1		"Equipment Use - Maintain spill kits on all mobile equipment."	Clarify: What about immobile equipment, like generators?	Mitigation measure in Table 9.1-1 now reads :"Maintain emergency spill kits on mobile equipment and at active drill and water supply pump sites. Generators, pumps and pump fuel supplies shall use absorbent mats and containment devices to contain spills (FMSCP, section 10.3)."	ERM
16	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1			Resolved		
17	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Equipment Use - Remove unserviceable equipment from use."	Clarify: What does this entail?	Mitigation measure in Table 9.1-1 now reads: "Monitor the efficacy of equipment and remove defective, unserviceable equipment from the site. " For example, if a water pump is not working properly and can no longer be serviced to operate within the manufacturer's specifications it will be removed and replaced.	ERM
17	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
18	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1	"Geological and Terrain Hazards - Monitor cleared areas and cut/fill slopes for signs of instability in areas of terrain class 4 or 5."	Clarify: What is meant by "monitor cleared areas"?	Mitigation measure in Table 9.1-1 now reads: "Visually monitor cleared areas and cut/fill slopes after significant precipitation events for signs of instability or erosion in areas of terrain class 4 or 5."	ERM
18	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8-1	Table 9-1		Resolved		
19	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.2	Section 9.2	Use of "ex."	Edit: "e.g." is used elsewhere - please modify for consistency.	The use of 'ex.' has been replaced with 'e.g.,' where is appeared in other sections of the plan.	ERM
19	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.2	Section 9.2		Resolved		
20	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.2-1	Table 9.2-1	"Noise and Vibration"	Add: Please add reference for Noise and Vibration Effects Monitoring Plan.	Reference to this plan has been added to Table 9.2-1.	ERM
20	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.2-1	Table 9.2-1		Resolved		
21	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.2-1	Table 9.2-1	"Noise and Vibration"	Clarify: "Conduct blasting on day shifts only" Specify time period (e.g., 8 AM-6 PM)?	Mitigation/management measure in Table 9.2-1 now reads: "Conduct blasting on day shifts only (e.g., between 6 AM and 6 PM)"	ERM
21	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.2-1	Table 9.2-1		Conduct blasting on day shifts only (e.g., between 6AM and 6PM) This sentence is no longer included in plan.	The following has been added to Table 9.5-1 "Conduct blasting between 6 AM and 6 PM".	
21	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.2-1	Table 9.2-1			Resolved		
22	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.3	Section 9.3	"As an additional layer of conservatism, NAG5..."	Clarify: What is meant by "conservatism"? Please reword.	This sentence now reads: "'As an additional layer of conservatism, all NAG5 (low ML potential) material will be prioritized in the construction of infrastructure where possible, and in particular near water courses (in accordance with ML/ARD Management Plan (Appendix 9-D, Section 6).'	ERM
22	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.3	Section 9.3		Conservatism is still used in updated sentence.	The sentence has been revised as follows: "While the difference in zinc leaching potential between NAG4 and NAG5 is small to negligible (AMEC 2014), NAG5 will be used preferentially for construction (in accordance with ML/ARD Management Plan, Figure 6.1-1: Flow Chart Illustrating the Decision Sequence and ML/ARD Management Strategies that will be Employed for Waste Rock and Overburden). Excess NAG overburden as well as NAG4 and NAG5 waste rock that is not used for construction purposes will be deposited in waste stockpiles."	
23	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.4	Section 9.4		Add: Reference to appropriate MPs, such as Soil MP, Veg MP, Invasive Plants MP.	Where applicable, Soil Management Plan, Invasive Plant Management Plan and Surface Erosion Prevention and Sediment Control Plan have been referenced.	ERM
23	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.4	Section 9		Section 9.4 does not included any of these references. Is this the correct revised section this is directed towards?	A list of all management plans relevant to the CEMP has been added to Section 2. References to other management plans, for specific mitigation measures, has been added throughout Section 9, where relevant.	
23	04-Apr-22	Indigenous Communities		LDN/UFN	Section 8.4	Section 9			Resolved		
24	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.4	Section 9.4	"... prevent loss of soils through erosion and colonisation by non-native vegetation..."	Clarify: Unclear, please reword this sentence.	This sentence has been removed from the final version of this CEMP, and Section 9.7 (Soils) has been aligned with the mitigation measures and monitoring relevant to construction as presented in the final Soil Management Plan (Appendix 9-B).	ERM
24	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.4	Section 9.4		Resolved		
25	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.4	Section 9.4	"Overburden will be stockpiled separate from soil and organic soil materials..."	Clarify: Unclear, please consider rewriting this sentence. Is the writer referring to mineral soil, stripped organic, and woody debris/vegetation?	This sentence has been removed from the final version of this CEMP, and Section 9.7 (Soils) has been aligned with the mitigation measures and monitoring relevant to construction as presented in the final Soil Management Plan (Appendix 9-B).	ERM
25	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.4	Section 9.4		Resolved		
26	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1	"Limit traffic in topsoil storage areas to minimize compaction."	Clarify: There will be traffic on the soil used for reclamation?	This sentence has been removed from the final version of this CEMP, and Section 9.7 (Soils) has been aligned with the mitigation measures and monitoring relevant to construction as presented in the final Soil Management Plan (Appendix 9-B).	ERM
26	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1		Resolved		
27	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1	"... drain salvage areas using trenching prior to salvage (e.g. wetlands)..."	Add: Salvage of what? Why are wetlands mentioned here? Would a reference to the wildlife mangement plan be appropriate?	This sentence has been removed from the final version of this CEMP, and Section 9.7 (Soils) has been aligned with the mitigation measures and monitoring relevant to construction as presented in the final Soil Management Plan (Appendix 9-B).	ERM
27	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.7-1		Sentence has not been removed - still present in Table 9.7-1.	This mitigation measure is applicable to soil salvage activities in areas with a high water table (i.e., wetlands) to dewater the soil for effective handling, thus remains in the table but has been revised as follows: "Where the water table is within 50 cm of the surface (e.g., wetlands), drain areas targeted for soil salvage using trenching1 prior to salvage and manage salvage operations in accordance with the SEPSCP, as follows: • As per the SEPSCP, establish erosion and sediment controls on stripped areas to reduce erosion risk and protect water quality, such as: • Temporary covers, such as hydroseed with mulch including a fall rye or coconut matting can also be applied in high-risk areas (e.g., slopes); • Use berms, waterbars and ditches to direct runoff away from rivers and streams; • Create sediment ponds to allow settling of sediments during higher-runoff events; and • Install silt fencing, straw wattles and check dams for additional sediment capture."	

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27	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.4-1	Table 9.7-1			Resolved		
28	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1	"Revegetate or monitor native species establishment..."	Edit: "Revegetate and monitor"	This sentence has been removed from the final version of this CEMP, and Section 9.7 (Soils) has been aligned with the mitigation measures and monitoring relevant to construction as presented in the final Soil Management Plan (Appendix 9-B).	ERM
28	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1		Resolved		
29	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1	"Temporarily halt topsoil clearing during periods..."	Edit: "Temporarily halt topsoil stripping and stockpiling"?	This sentence has been removed from the final version of this CEMP, and Section 9.7 (Soils) has been aligned with the mitigation measures and monitoring relevant to construction as presented in the final Soil Management Plan (Appendix 9-B).	ERM
29	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.4-1	Table 9.4-1		Resolved		
30	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.5	Section 9.5		Add: Reference to MP in the intro paragraph and section references in the table Categories, maybe?	Reference to the Air Quality and Fugitive Dust Management Plan (Appendix 9-O) added to Section 9.8.	ERM
30	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.5	Section 9.5		Resolved		
31	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.5-1	Table 9.5-1		Edit: Put bulletpoint list in one cell, not seperately.	Bullet points have been placed into single cells, where appropriate.	ERM
31	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.5-1	Table 9.5-1		Resolved		
32	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.5-1	Table 9.5-1	"Waste - ... as will be described in the Wildlife Management and Monitoring Plan..."	Edit: Are other chemical and hazardous waste MPs relevant?	Waste management has been added to Table 9.1-1 and mitigation measures are consistent with the Wildlife Mitigation and Monitoring Plan [Appendix 9-H]; Chemicals and Materials Storage, Transfer and Handling Plan [Appendix 9-M] and Waste (Refuse and Emissions) Management Plan [Appendix 9-N]	ERM
32	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.5-1	Table 9.5-1	"Waste - ... as will be described in the Wildlife Management and Monitoring Plan..."	Resolved		
33	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.6	Section 9.6	-	Add: Reference relevant management plans (Appendix, Section(s)). Whitebark MP? VMP?	Reference to the Vegetation Management Plan (Appendix 9-F) has been added to Section 9.9. Reference to the Invasive Plant Management Plan (Appendix 9-G) has been added to Section 10.10.	ERM
33	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.6	Section 9.6		There is not a section 10.10 in the latest version of this document provided.	Section 10.10 was a typo. Reference to relevant management plans have been added to Section 9.9.	
33	04-Apr-22	Indigenous Communities		LDN/UFN	Section 8.6	Section 9.6			Resolved		
34	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.6	Section 9.6	"Site disturbance, clearing and grading, and development of all Mine Site infrastructure has the potential to lead to ecosystem loss through clearing"	Edit: It will lead to ecosystem loss. Please edit as required.	This sentence has been removed from the final version of this CEMP.	ERM
34	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.6	Section 9.6		Resolved		
35	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.6	Section 9.6	"Dust deposition results from construction activities has the potential to effect individual plans and ecosystems..."	Edit: It has the potential to affect surrounding terrestrial and aquatic ecosystems, including plants, wildlife, and fisheries.	Sentence in 9.9 now reads: "Fugitive dust deposition resulting from construction activities has the potential to affect plants, wildlife and fish, and may be elevated during periods of high winds and dry conditions."	ERM
35	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.6	Section 9.6		Resolved		
36	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1	"Plant Species and Ecosystems at Risk - Machines will be used on frozen soil..."	Clarify: Humus is a component of soil. Please replace "shrub and herb cover" with "vegetative cover".	This sentence has been removed from the final version of this CEMP, and has been replaced by the following in Table 9.9-1: "Avoid sensitive features (old-growth forests, at risk ecosystems, riparian areas, rare plants, or wildlife habitat such as dens and nests). In areas with sensitive features where clearing cannot be avoided and soil disturbance is not required (e.g., for road edges, or to create safe setbacks from forest to buildings), use low-disturbance methods and removal techniques that are most appropriate, such as pruning, mowing, girdling, topping, hand-falling, or clearing on frozen ground." This is consistent with the Vegetation Management Plan.	ERM
36	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1		Resolved		
37	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1	"Plant Species and Ecosystems at Risk - Implement the ISMP..."	Edit: Define ISMP acronym.	This was a typo and meant to refer to the "Invasive Plant Management Plan". Table 9.6-1 now refers to the IPMP (Appendix 9-G).	ERM
37	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1		Resolved		
38	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1	"Plant Species and Ecosystems at Risk"	Add: Reference for Whitebark Pine Blister Rust Monitoring, section of MP containing planting trial info (RCP?)	Reference to monitoring and reclamation research associated with whitebark pine is outlined in the RCP (Chapter 4 Section 4.2.5.4) has been added to Section 15.7.4.	ERM
38	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1		Resolved	Reference to monitoring and reclamation research associated with whitebark pine is outlined in the RCP (Chapter 4 Section 4.2.5.4) has been added to Section 15.7.3.	
39	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1	"Plant Species and Ecosystems at Risk"	Edit: Define StFN acronym.	The acronym StFN has been defined as " Stellat'en First Nation" in its first occurrence (Section 1) and is included in the acronyms and abbreviations table.	ERM
39	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.6-1	Table 9.6-1		Resolved		
40	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.6.1	Table 9.6-1		Add: Reference to IPMP.	A reference to the Invasive Plant Management Plan has been added to Section 9.9-1.	ERM
40	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved	A reference to the Invasive Plant Management Plan has been added to Section 9.9.	
41	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.7	Section 9.10	"watershed alteration"	Clarify: Perhaps "altered hydrological processes" is more appropriate.	The sentence has been revised as follows: "Potential effects to wetlands due to construction include loss of wetland extent/function resulting from site clearing, grubbing, and altered hydrological processes resulting in water table drawdown, and diversion of surface and seepage water."	ERM
41	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.7	Section 9.10		Resolved		
42	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.7	9.1		Add: Reference to Wetland Management and Offsetting Plan, Wetland Management Plan.	The following has been added to Section 9.10: "Table 9.10-1 presents mitigation measures that BW Gold will implement to mitigate potential effects to wetlands during the Project's Construction phase in accordance with the Wetland Management and Offsetting Plan (ERM 2021)."	ERM
42	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.7	9.1		Resolved		
43	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.7	9.1	"Wetland Management and Offsetting Plan that will include, among other items, the methods by which wetland conditions will be established and monitored as well as..."	Edit: "Documented" instead of "established"	Revised to: "...the methods by which wetland conditions will be documented and monitored..."	ERM
43	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.7	9.1		Resolved		

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44	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.7-1	"Prior to construction, install sediment controls, including silt fences, containment structures, collection and diversion ditches, sediment traps, and sediment ponds prior to and maintain them during construction activities."	Clarify: The end of this sentence does not make sense.	This sentence has been removed from the final CEMP, and final mitigation measures are in accordance with the Wetland Management and Offsetting Plan.	ERM
44	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.7-1		Resolved		
45	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.10-1	"Northern and Southern"	Edit: Not capitalized.	Revised to lowercase as follows: "Construct the northern and southern diversions during the Construction phase to supplement the freshwater supply system (FWSS)"	ERM
45	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.10-1		Sentence removed.	The mitigation measure was removed from the CEMP because it is a mine plan consideration and addressed in Chapter 3.	
45	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.7-1	Table 9.10-1			Resolved		
46	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.7-1	"apportionment"	Replace: "in regard to the release of flow into Davidson Creek"	This mitigation measure has been removed as it is not applicable to construction (design-related).	ERM
46	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.7-1		Resolved		
47	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.7-1	"no-work and management work zones (with restrictions, e.g. no heavy machinery, etc.)"	Edit: Please rewrite with proper use of parathenses, if required.	Parentheses in this sentence have been updated, as follows: "...management work zones with restrictions (e.g. no heavy machinery, etc.) and setbacks..."	ERM
47	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.7-1	Table 9.9-1		Not revised in table 9.9-1 "pre-clearing" row.	This mitigation measure has been removed from CEMP Table 9.9-1 in alignment with the current VMP.	
47	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.7-1	Table 9.9-1			Resolved		
48	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.8	Table 9.8-1	-	Add: References to the appropriate MPs. Please reference the corresponding section of the WMMP or other MP so that readers can find information quickly.	Reference to the Wildlife Mitigation and Management Plan has been added to Section 9.11 (wildlife Protection).	ERM
48	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.8	Table 9.8-1		Resolved		
49	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.8	Table 9.8-1	-	Edit: Reformat all lists that are inside of tables so that bullets are in the same cell.	Bullet lists in this table have been collapsed into single cells.	ERM
49	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
50	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1	Table 9.8-1	-	Edit: Rearrange the table to include a category with general mitigation measures so that measures aren't being duplicated for every category.	Mitigation measures in Table 9.11-1 have been organized by category (ex. Habitat loss and alteration) as well as species specific mitigation measures to reduce duplication.	ERM
50	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
51	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"no-work and management work zones (with restrictions, e.g. no heavy machinery, etc.)"	Edit: Please rewrite with proper use of parathenses, if required.	See comment ID 47	ERM
51	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.11-1		Parenthesis have been removed completely in Table 9.11-1 in row 3.	The Table 9.11-1 mitigation measure has been revised as follows for clarity: "Avoidance of amphibian breeding ponds will include no-work buffers surrounding known breeding ponds and taking into account the Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia (MOE 2014b), which recommends a 30-150 m buffer zone. The no-work buffer will be flagged in consultation a qualified professional."	
51	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 AMPHIBIANS	Table 9.11-1			Resolved		
52	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Implement the VMP, ISMP and RCP to provide wildlife habitat including for amphibians, including progressive reclamation using local native vegetation, or appropriate commercially grown, weed-free native species"	This is the kind of reference I have been looking for!	Noted	ERM
52	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1		Resolved		
53	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Discharge effluent that will meet guidelines for the protection of aquatic life..."	Add: Reference guidelines.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
53	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.11-1		Aquatic life are not covered in the WMMP the reference should be the Aquatic Effects Monitoring Program.	This mitigation measure has been revised as follows in Table 9.11-1 (Amphibians): "Effluent will meet effluent quality criteria (as defined in discharge permits) prior to discharge to the receiving environment. Refer to MSDP (Section 10) for potential nonconformities and corresponding corrective actions (i.e., mitigation measures) associated with mine site discharges. "	
53	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 AMPHIBIANS	Table 9.11-1			Resolved		
55	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Implement adaptive management measures to deter water birds and amphibians from the TSF and pit lake waters"	Add: Reference to section of WMMP. "As is described in the..."	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
55	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
56	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Avoid riparian areas and old growth dorests, as will be described in the CEMP."	Clarify: What is this referring to? Confusing as this is in the CEMP.	This is residual language from the EA. "As will be described in the CEMP" has been removed.	ERM
56	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
57	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Follow Approved Work Pratices for Managing..."	Edit: Duplicate.	Kept as one refers to vegetation and one refers to amphibians.	ERM
57	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
58	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Follow best management practices as desceibed in the Guidelines for Amphibian..."	Edit: Duplicate.	Kept as one refers to vegetation and one refers to amphibians.	ERM
58	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
59	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Implement the Chemicals and Materials Storage, Transfer, and Handling Plan, including explosives use."	Clarify: How is this relevant?	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
59	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP				Resolved		
60	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"Implement preventative protocols for cleaning of equipment..."	Add: Should reference protocol in IPMP.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP. Preventative protocols are discussed in Section 9.11.1 and Appendix D.	ERM

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60	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.11-1		IPMP protocol is not referenced in Section 9.11.1.	Reference to the IPMP protocol for equipment cleaning has been added to Table 9.11-1 (Amphibians) as follows: "All staff will follow vehicle and equipment cleaning procedures, after working in areas with known invasive plants in accordance with IPMP Section 8.2.1."	
60	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 AMPHIBIANS	Table 9.11-1			Resolved		
61	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1	"If amphibian mortality on roadways is identified along Project Roads..."	Edit: Duplicate of above. Please review cell above for grammar and run-on sentence.	The duplicate cell has been deleted, and sentence separated into 2 sentences as follows: "...If amphibian mortality on roadways is identified along Project Roads, adaptive management measures will be implemented. Management measures may include additional consideration for amphibian passage (e.g., assisted crossing, tunnel and fence systems or limitations on timing of traffic movement in that area)."	ERM
61	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 AMPHIBIANS	Table 9.8-1		Resolved	The duplicate cell has been deleted, and revised as follows: "If amphibian mortality on roadways is identified, adaptive management measures will be implemented in accordance with the WMMP such as additional consideration for amphibian passage (e.g., tunnel and fence systems or limitations on timing of traffic movement in that area)."	
62	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 BATS	Table 9.8-1	-	Add: Reference to appropriate section of WMMP.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
62	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 BATS	Table 9.8-1		Species specific mitigation measures listed still need reference to appropriate section of WMMP.	References to species-specific sections of the WMMP has been added to Table 9.11-1.	
62	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 BATS	Table 9.8-1			Resolved		
63	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 CARIBOU	Table 9.8-1	"An access management plan will be developed..."	Add: Reference to MP and CMMP.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP and refers directly to the Caribou Management Plan.	ERM
63	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 CARIBOU	Table 9.8-1		Resolved		
64	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 CARIBOU	Table 9.8-1	"Include wildlife awareness information in regular safety..."	Edit: Duplicate of below.	This mitigation measure has been deleted. Details on the project orientation topics can be found in Section 12.	ERM
64	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 CARIBOU	Table 9.8-1		Resolved		
65	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 CARIBOU	Table 9.8-1	"Survey design will be developed..."	Clarify: Where will this survey design be available? In the WMMP and CMMP?	The final survey design has not been determined; a draft plan is provided in Section 6 of the Caribou Mitigation and Monitoring Plan. As indicated in the plan, BW Gold will collaborate with UFN and LDN and provincial biologists to conduct a collaborative ungulate survey, or contribute to a provincial survey, which covers the offset areas and the Designated Project Area plus a buffer. This survey will be designed to address ungulate monitoring for both moose and caribou.	ERM
65	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 CARIBOU	Table 9.8-1		Resolved		
66	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	-	Add: Retain snags as wildlife trees where appropriate.	Mitigation measure has been added to Table 9.11-1: "Retain wildlife trees as snags where appropriate and possible"	ERM
66	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		Resolved		
67	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"passerines (or birds)"	Clarify: Passerines are birds.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
67	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		Resolved		
68	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"Reporting any habitat feature (e.g., nest, den, mineral lick) encountered during the course of work activities by mine personnel or contractors to mine environmental staff immediately for follow-up actions as required as will be described in the WMMP"	Clarify: Please rewrite for clarity.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
68	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		Resolved		
69	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"Implement a WMMP, including adaptive management measures for the TSF and open pit waters, as required, monitoring program for the transmission line (monitor and investigate bird mortality) and implement adaptive measures to reduce further mortality"	Clarify: Unclear monitoring timeline. Provide reference to monitoring survey methodology. Please modify for correct sentence structure.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP. A summary of the wildlife monitoring program that will be implemented during construction is summarized in Section 15.9.	ERM
69	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Section 15.9		Survey methodology missing from some species subsections (e.g., bats).	A summary of wildlife survey methodologies during construction, including bats, is provided in Section 15.9. Further details can be found in the WMMP.	
69	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Section 15.9			Resolved		
70	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"Reports of wildlife frequenting Project-controlled roads will be provided to monitoring committees in accordance with agreed to terms of reference and protocols for follow-up and review of mitigation measure effectiveness."	Clarify: Last sentence does not make sense. Please edit for clarity.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP. A summary of external reporting during construction is provided in Section 16.2.	ERM
70	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		Resolved		
71	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1			Empty row in original transmittal.	ERM
71	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		Resolved		
72	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"As part of the adaptive management plan, consideration will be given to updating the WMMP to reduce monitoring requirements for transmission line conductor strikes should results of the initial three year monitoring period indicate the potential for strikes has been adequately mitigated."	Clarify: Are adaptive mangement thresholds discussed in detail in the WMMP? Monitoring effort appears to be quite low already, with one technician at three times a year.	Adaptive management triggers are detailed in the WMMP.	ERM

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72	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		No response to "monitoring effort appears to be quite low already, with one techinician at three times a year".	Monitoring effort for potential bird strikes along the transmission line has been designed to target the locations and times which are more likely to experience bird strikes. This focused effort allows efficient monitoring, given that the length of the transmission line is too long to monitor comprehensively (135 km) and bird activity varies greatly across the year. The WMMP contains a detailed monitoring plan and detailed approach for adaptive management, including thresholds for adaptive management action. These methods are consistent with Best Management Practices published by the Avian Powerline Committee and BirdLife International. Survey details include: • Survey sites will be identified by a qualified professional who has conducted wildlife surveys along the transmission line and can identify areas which may have a higher risk of bird strikes (e.g., near large wetlands). • There are 3 monitoring periods comprised of 1 month (April, June, September), with weekly surveys during each period; therefore survey effort totals 12 weeks of surveying per year. • Surveys will be conducted in transects of 20-25 m widths spanning 50 m on each side of the transmission line.	
72	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1			Resolved		
73	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"Commitment for field work during permitting, and if species at risk, representative of those that will be impacted by the Project are not observed in at least some of the reference wetlands, replacement wetlands will be located with representative species at risk, as will be described in the Wetland Management and Offsetting Plan."	Clarify: I don't understand this sentence.	The was a mitigation measure from the EA and has been removed from the final CEMP. Since this time monitoring programs, monitoring objectives and compensation success criteria have been developed during permitting and are presented in various management plans, including: • The CMMP for offsetting and reclamation measures related to caribou; • The RCP for measures related to wildlife habitat reclamation and monitoring post-closure; • The WMOP for measures related to the offsetting and reclamation at wetlands; • The WPMP for reclamation measures related to whitebark pine.	ERM
73	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1		Resolved		
74	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.8-1	"Feathering forest edges is a method of reducing the potential for windthrow."	Add: Please consider add the retention or topping of snags/danger trees as wildlife trees.	The following has been added to this mitigation measure: "Retention or topping of snags/ danger trees as wildlife trees will be considered where there is no risk to human safety."	ERM
74	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.11-1		"Retention or topping of snags/danger trees as wildlife trees will be considered where there is no risk to human safety." This sentence is not found in the document.	This mitigation ("Wildlife trees will be retained as snags if they pose little to no risk to human safety.") has been added to Table 9.11-1 (Birds).	
74	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.8-1 FOREST AND GRASSLAND BIRDS	Table 9.11-1			Resolved		
75	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FURBEARERS	Table 9.8-1	"Include wildlife awareness information in regular mine safety and environmental inductions performed by the mine"	Edit: Discussed a few cells down.	Cell has been deleted	ERM
75	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FURBEARERS	Table 9.8-1		Resolved		
76	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FURBEARERS	Table 9.8-1	""New Gold will implement Waste (Refuse and Emissions) Management Plan, including the following measures:"	Edit: Why is this in quotations? Please put the whole list in one cell for clarity.	This mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP.	ERM
76	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FURBEARERS	Table 9.8-1		Resolved		
77	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FURBEARERS	Table 9.8-1	"Follow guidelines for wildlife "least risk windows", as will be described in the Wildlife Management and Monitoring Plan"	Add: Reference to appropriate section of the WMMP and mention pre-disturbace surveys here.	This specific mitigation measure has been removed from Table 9.11-1 in the final CEMP to align with the WMMP. Additional clarity has been provided with respect to no work buffer zones as well as reference to pre-construction surveys.	ERM
77	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 FURBEARERS	Table 9.8-1		Resolved		
78	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 MOOSE	Table 9.8-1	"A 30 metre vegetation buffer will be used to protect wetland functions"	Add: Why doesn't this mitigation measure appear for any other category? This should be included in the "general" category mentioned in an earlier comment.	This mitigation has been moved to Table 9.10-1 (Wetland Mitigation Measures).	ERM
78	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 MOOSE	Table 9.8-1		Resolved		
79	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1	"■ Bear awareness program"	Edit: Move the wildlife awareness measure into a "general" category.	This mitigation measure is now captured in Section 12 (Project Orientation).	ERM
79	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1		Resolved		
80	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1	"Using wildlife cameras to support the incidental observation recording program, which may include areas of known or potential interaction and where mitigation or reclamation has been undertaken, e.g., deactivated and ultimately reclaimed exploration access road or breaks in snow banks along the mine access road."	Clarify: Where is this mentioned in a WMMP and how does it apply to waterbirds? Snow banks?	This mitigation measure has been removed as it is not applicable or feasible to apply to water birds.	ERM
80	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1		Resolved		
81	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1	"Water quality of the pit lake will be monitored during Closure and Post-Closure to validate model predictions and to provide opportunity for adaptive management for wildlife"	Add: Please provide reference to appropriate MP and section.	This mitigation has been removed as it applies to closure and post-closure.	ERM
81	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1		Resolved		
82	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1	"New Gold will work Nadleh and Stellat'en to develop a research and monitoring program to study the potential effects of EMF [electromagnetic fields] on birds along the transmission line. Existing information on the effects of EMF on birds from other transmission lines will be used to inform initial mitigation strategies"	Edit: "work with Nadleh" Why square brackets? Initial mitigation strategies in the WMMP? Provide reference.	This mitigation is out of scope for the CEMP and has been deleted. The EMF study is addressed in Section 8.7.3 of the Wildlife Mitigation and Management Plan.	ERM
82	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.8-1 WATERBIRDS	Table 9.8-1		Resolved		
83	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.8.1		"Prevention protocols require cleaning and possibly disinfecting equipment between work and wetland sites.	Edit: "Prevention protocols require cleaning or disinfecting equipment" There are standard practices for disinfecting equipment during fieldwork - please provide reference to source, if applicable.	CEMP Appendix D contains the protocol for power mobile equipment disinfection. The following bullet has been added regarding the personnel disinfection protocol for those completing fieldwork in aquatic environments: "- General cleaning protocols for field work around wetlands (i.e., amphibian surveys, salvage, wetlands surveying) following BC MOE (2008): Standard Operating Procedures: Hygiene Protocols for Aquatic Field Research, 2008."	ERM
83	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.8.1			Resolved		

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84	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 8.8.1		"Clean construction and excavation equipment working in wetlands between sites. Any areas with suspected or known occurrence of chytrid must follow decontamination protocols or have site-specific gear."	Clarify: Is there more information concerning the disinfection of machinery in a separate MP?	No this is a best management practice and is not considered in a separate management plan. The equipment contamination procedure is presented in Appendix D of the CEMP.	ERM
84	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 8.8.1			Resolved		
85	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1	"No angling is permitted by staff or contractors while on company business"	Clarify: What is meant by "company business"?	Company business means while employees or contractors are at mine site or travelling to and from the mine site. The mitigation measure has been revised as follows: "No angling is permitted by employees or contractors while on the mine site or travelling to/from the mine site"	ERM
85	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1		Resolved		
86	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1	"Keep emergency spill response kits in all light vehicles"	Clarify: What about in machinery?	Mobile equipment has been added as follows: "Maintain emergency spill response kits in mobile equipment and light vehicles"	ERM
86	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1		Resolved		
87	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1	"Adhere to riparian setback no-work zones as identified in Environmental Constraint Mapping"	Clarify: Does the Env Contraint Mapping include setbacks or actual boundaries of the mapped features?	A description of the mapped features is presented in Section 6. All mapped features are actual extent, with the exception of "Protected Riparian Areas", which represent a 30m riparian area around a watercourse or waterbody that lies outside of the Project footprint.	ERM
87	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Section 7		Section 6 details the construction schedule and does not include a description of the mapped features.	Section 7 (Environmental Constraint Mapping) provides the preliminary environmental constraint mapping in Figures 7-1 and 7-2.	
87	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.9-1	Section 7			Resolved		
88	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1	"Conduct mobile re-fueling a minimum of 30 m away from, or outside of a riparian area, or areas with a significant downslope to a watercourse"	Clarify: Split this into two sentences for clarity.	Sentenced edited as follows: "Re-fuel mobile equipment a minimum of 30 m away from riparian areas and areas with a significant downslope to a watercourse."	ERM
88	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1		Resolved		
89	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1		Add: Mention monitoring requirements/frequency with regard to instream works.	Monitoring and frequency requirements during instream work have been added to Section 15.6 as follows: During instream works or after a significant rainfall event, the Environmental Monitor will sample at a frequency determined by the TARP provided in Table 9-2 of the SEPSCP.	ERM
89	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.9-1	Table 9.9-1		This statement mentioned to have been added to Section 15.6 is not included.	Section 15.6 (Water Quality Monitoring) has been revised for better alignment with the SEPSCP and to provide more detail on effectiveness monitoring. The following statement has been added to Section 15.6.1: "During instream works or after a significant rainfall event, the Environmental Monitor will sample at a frequency determined by the TARP provided in Table 9-2 of the SEPSCP."	
89	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.9-1	Table 9.9-1			Resolved		
90	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.10-1	9.10-1		Clarify: Several of these cells end with (Agriculture and Range) or (Water Use) - what are these?	These referenced the EA land use VCs. They have been removed from this table.	ERM
90	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.10-1	9.10-1		Resolved		
91	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.10-1	Table 9.10-1	"Compensate affected trapline holders in accordance with industry and provincial protocols with associated proof of lost revenue"	Add: Reference to industry/provincial protocols.	The mitigation measure has been revised as follows: "Compensate affected trapline holders in accordance with industry and provincial protocols (BC Registered Trapper and Petroleum Industry Agreement on Notification and Compensation, October 2006) with associated proof of lost revenue"	ERM
91	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.10-1	Table 9.13-1		This sentence/reference has been removed completely from the plan. Why?	Table 9.13-1 (Non-traditional Land Use Mitigation Measures) has been revised to focus on mitigation measures relevant to protection of the environment during the construction period. For this reason, a number of design and post-construction related mitigation measures were removed between the A.1 and B.1 versions of the CEMP. The specific mitigation measure referenced by the reviewer was a mitigation measure committed to during the Project's environmental assessment process. BW Gold remains committed to compensating affected trapline owners in accordance with industry and provincial protocols (BC Registered Trapper and Petroleum Industry Agreement on Notification and Compensation, October 2006) with associated proof of lost revenue.	
91	04-Apr-22	Indigenous Communities		LDN/UFN	Table 8.10-1	Table 9.13-1			Resolved		
92	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.10-1	Table 9.10-1	-	Add: Include MP references with sections where applicable.	References to relevant MPs have been included throughout Table 9.10-1.	ERM
92	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.10-1	Table 9.10-1		Resolved		
93	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 8.11-1	Table 9.11-1	"Where sites are within 100 m of the Project construction footprint: ■ site boundaries are marked as "No Work Zone" on Environmental Constraint Maps"	Clarify: Do polygons in the Environmental Constraint Maps (Section 5) include setbacks/buffers? The arch points have no polygon/boundary and I cannot find No Work Zones. Am I looking at the right maps?	No Work Zones have been added to the constraint mapping in Section 7.	ERM
93	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 8.11-1	Table 9.11-1		Resolved		
94	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9	Section 10		Add: Reference relevant MPs.	References have been added where relevant, including: Fuel Management and Spill Control Plan, Chemical and Materials Storage Plan, and Cyanide Management Plan.	ERM
94	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9	Multiple		Does not include reference to the Cyanide Management plan.	Reference to the Cyanide Management Plan has been added to Sections 2 , 10, and 15.4 as well as Table 9.1-1.	
94	04-Apr-22	Indigenous Communities		LDN/UFN	Section 9	Multiple			Resolved		
95	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9.1	Section 10.1		Add: There is a standalone management plan for fuel and spills -- why not reference it?	Yes, and the following has been added to the start of Section 10.1: "Spill response measures shall be in accordance with the Fuel Management and Spill Control Plan."	ERM
95	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9.1	Section 10.1		Resolved		
96	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3	"Spill response supplies and equipment will be kept at the Mine Site during the Construction phase."	?	Deleted as redundant with information provided in 10.3.1 to 10.3.3.	ERM
96	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3		Resolved		
97	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3	"Smaller spill response kits will be kept at all discrete construction sites with multiple pieces of mobile equipment, and carried at all times on specific mobile equipment."	Clarify: Please be more specific and reference related documents. "Smaller spill response kits" as in a Level C kit?	Redundant with the information in 10.3.1 to 10.3.3 and as such have deleted.	ERM
97	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3		Resolved		

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98	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3	"Spill response equipment will be located at sites where fuels, oil, and other materials are stored."	Clarify: What other materials? Hazardous materials?	This sentence has been clarified as follows: "Spill response equipment will be located at sites where fuels, oil, cyanide, and other hazardous materials are stored"	ERM
98	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3		Resolved		
99	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3	"A written regular review and inspection program will be developed and applied."	Clarify: What is a "written regular review"? A review and inspection program for what? Is this not discussed in the FMSCP?	The FMSCP has been referenced, and sentence revised as follows: "A review and inspection program has been developed and will be applied in accordance with the FMSCP."	ERM
99	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9.3	Section 10.3		Resolved		
100	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 9.4	Section 10.4	"All storage vessels will double walled."	Edit: "will be double-walled"	Edit has been implemented.	ERM
100	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 9.4	Section 10.4		Resolved		
101	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 10	Section 11	"An Emergency Response Team has been assembled from Project"	Add: (ERT)	The acronym has been added.	ERM
101	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 10	Section 11		Resolved		
102	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 10	Section 11	"Mine Emergency Response Plan (MERP; Appendix F),"	This is the kind of reference I have been looking for!	Noted.	ERM
102	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 10	Section 11		Resolved		
103	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 12	Section 13	"implementation. contractors will be required to provide accurate and timely construction and mobilization schedules in advance of work so that"	Edit: Capitalize "contractors"	The edit has been implemented.	ERM
103	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 12	Section 13		Resolved		
104	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 12.1	Section 13.1	"BMP for Bats (BC MOE 2016), and"	Edit: Remove "and"	Edit has been implemented.	ERM
104	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 12.1	Section 13.1		Resolved		
105	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 12.2	Section 13.2	"These include set-backs established around residences such as dens and nests."	Edit: Replace "residences" with "habitat features"	Edit has been implemented.	ERM
105	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 12.2	Section 13.2		Resolved		
106	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1	"■ No in-water work"	Clarify: in-water or in-stream?	In-water is considered broader, and has been clarified in the text as follows: "No in-water work (includes within the high-water mark of all water bodies: watercourses, lakes, wetlands etc.)"	ERM
106	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1		Resolved		
107	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1	"Nests, eggs, and young"	Add: What about adult birds?	Clarified in the text as follows: "Nests, eggs, and young, and mature"	ERM
107	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1		Resolved		
108	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1	"■ If caribou are observed on site during construction or operations, work will be stopped or managed to reduce isturbance to caribou"	Add: Who is responsible for managing the caribou should this occur?	This mitigation has been revised as follows: "If caribou are observed on site during construction or operations, work will be stopped or managed (by the Environmental Manager) in accordance with the WMMP to reduce disturbance to caribou"	ERM
108	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1		Resolved		
109	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1	"■ Establish buffer zones around denning features, including suitable denning habitat for fisher or marten denning, although dens will not be individually identified"	Clarify: How will this be determined? Reference MP and survey methodology.	Reference to Section 8.5 of the Wildlife Mitigation and Management Plan has been added.	ERM
109	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Table 12.1-1	Table 13.1-1		Resolved		
110	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 14.3	Section 15.3	"Volume and stockpile location tracking;"	Clarify: Will the stockpiles be mapped? Please reference section in MP.	Yes, and reference to Section 17 of the Soil Management Plan has been added.	ERM
110	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 14.3	Section 15.3		Reference to section 17 of the SMP has not been added.	A map of the soil stockpile location is presented in the SMP, and the following has been added to CEMP Section 9.7.2: "Soil stockpile design details, including consideration of stability and water management, are provided in the Stockpiles Geotechnical and Water Management Design Report (KP 2021b) and a Supplemental Stability Assessment Report (KP 2022). Soil stockpile locations will be in accordance with Figure 10.1-1 of the SMP."	
110	04-Apr-22	Indigenous Communities		LDN/UFN	Section 14.3	Section 15.3			Resolved		
111	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 14.7.3	Section 15.7.6	"Re-vegetated riparian areas will be monitored on a monthly basis for vegetative establishment, with the goal of 80% ground cover."	Add: Provide a brief description of how this will be accomplished. Reference the appropriate MPs and survey methodology.	Revegetation monitoring is described in the RCP. The following sentence has been added to Section 15.7.6: "Details of re-vegetation monitoring program is provided in the RCP (Chapter 4, Section 4.2.6)."	ERM
111	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 14.7.3	Section 15.7.6		Resolved		
123	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 15.1	Section 16.3	"BW Gold will assume the responsibility of record keeping associated with the CEMP. Data will be entered into suitable electronic databases and have quality control checks completed upon receipt of results. Data will be entered in a format and program(s) that allows for comparison between years, and be stored in a single file format for each type of survey or monitoring activity."	Clarify: Please be more specific. What types of databases and how will control checks be performed? What types of programs? Excel?	This section has been revised as follows: "Data will be entered into suitable electronic databases (BW Gold has purchased Isometrix as their Environment, Health and Safety database). Quality control checks will be performed by a senior member of the Environment team upon receipt of results. Data will be entered in a format and program(s) (such as Microsoft Excel or R Project) that allows for comparison between years, and be stored in a single file format for each type of survey or monitoring activity."	ERM
123	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 15.1	Section 16.3		Resolved		
124	29-Jun-21	Indigenous Communities		LDN/UFN	CEMP	Section 15.2.1			Add: Please attach the form template in an appendix.	An incident response form will not be appended to the CEMP as any changes to the form will trigger revisions to the CEMP and associated external review process. A draft incident response from can be provided under separate cover for review for information purposes only. A current version of the form will be available onsite.	ERM
124	25-Jan-22	Indigenous Communities		LDN/UFN	CEMP	Section 15.2.1	Appendix G		Has this form been provided?	A draft Environment Incident Report form and Wildlife Incident Report form is provide in Appendix H and Appendix I, respectively for information purposes only. A current version of the form will be available onsite.	
124	04-Apr-22	Indigenous Communities		LDN/UFN	Section 15.2.1	Appendix G			Resolved		

Blackwater Gold Project – CEMP Comment Tracking Table											
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ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Revised Section or Page	Comment Theme	Comment	Response	Author
125	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	TSF Water Quality and Management	The CEMP states that mine impacted water will be stored in the TSF during the construction phase. It is not clear how much water storage capacity the TSF will have during the construction phase or under what, if any, circumstances discharge from the TSF would be required. Management of TSF water during the construction phase is important because TSF water quality may be impacted by turbidity or acid rock drainage. Impacted streams may report to TSF either directly or through pre-treatment for TSS removal or ARD neutralization. Mitigation plans included in the CEMP do not include TSF water quality and the associated management strategies. To develop proper mitigation plans and minimize the environmental impact of construction activities, TSF water quality and any treatments required including during the initial phases of the project must be considered. Recommendation: The CEMP should discuss the water storage capacity of the TSF during the construction phase as well as water management strategies that will prevent the release of water in a way that causes impacts to the downstream environment.	The only reference to directing "surface runoff" to the TSF or designated sediment control structure is in Table 9.10-1. Site water management and discharge monitoring is provided in detail in the Mine Site Water Management Plan and Discharge Management Plan. Reference to this plan has been included in Table 9.7-1 as follows: "Direct all surface runoff from plant site grading, Open Pit development, TSF construction and waste rock storage area development to the TSF basin or other designed sediment control structures and monitor in accordance with Section 8 of the Mine Site Water Management Plan and Discharge Management Plan."	ERM
125	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (December 2021)	Section 9.3		TSF Water Quality and Management	Comment was not addressed. TSF Water Management. The CEMP must provide clear information on the water storage capacity in the TSF during the construction phase and specific water management and mitigation strategies that will prevent the release of contact water and subsequent adverse effects to the downstream receiving environment. Blackwater Gold's Response: The only reference to directing "surface runoff" to the TSF or designated sediment control structure is in Table 9.10-1. Site water management and discharge monitoring is provided in detail in the Mine Site Water Management Plan and Discharge Management Plan. Reference to this plan has been included in Table 9.7-1 as follows: "Direct all surface runoff from plant site grading, Open Pit development, TSF construction and waste rock storage area development to the TSF basin or other designed sediment control structures and monitor in accordance with Section 8 of the Mine Site Water Management Plan and Discharge Management Plan." Blackwater Gold responded that a reference was added in Table 9.7-1 of the CEMP to the MWWMP that provides all this information; however, the MWWMP does not provide the information requested. The request is to address the concern in the CEMP.	Section 9.3.2 Tailings Storage Facility Water Management has been added to the CEMP to specify the following in response to the reviewer comments (reference to directing surface runoff is no longer included in Table 9.10-1): • water storage capacities in the TSF C supernatant pond (available for use during construction) and the water management pond (WMP) • water storage management/mitigations for the TSF C pond and WMP to prevent the release of contact water to the downstream receiving environment	
126	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	Water Quality Monitoring	Use of explosives during construction, ore stockpiling, overburden piles and the continued construction during operation increase the potential for contamination and need for multi-factor monitoring of water quality. Section 14.6 of the CEMP for Water Quality Monitoring describes that impacted water streams will be monitored visually and sampled for total suspended solids (TSS) and turbidity regularly. In addition to these measurements, water samples should be analyzed for dissolved metals, anions, and nutrients if file pH measurement in samples is below 6.5. This would help identify sources of contamination early on and enact contingency plans as needed. Recommendation: Field pH measurements must also be completed in samples collected from impacted waters. If pH is below 6.5, sample should be analyzed for additional contaminants of potential concern including metals, anions and nutrients. The CEMP should also include regular sampling of the TSF and TSF seepage to assess water quality. TSF water quality should be used to trigger other actions. The use of handheld pH/conductivity/turbidity meters for weekly measurement of stored TSF water is recommended for use as a potential trigger.	Section 15.6 of the CEMP is intended to describe water quality monitoring associated with construction activities with a water feature interface on an as-needed basis (i.e. only for the duration of a specific activity), for example, a new bridge crossing. Section 7.3.1 of the Mine Site Water Management Plan and Discharge Management Plan provides details on the broad surface water quality monitoring program. The following has been added to Section 15.6 of the CEMP to make this distinction: "The mine site surface water quality monitoring program for Construction and Operations is presented in the MDSP (see Section 7.3 in Appendix 9-E)."	ERM
126	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (December 2021)	Section 15.6		Water Quality Monitoring	**Comment was not addressed.** Water Quality Monitoring. The list of parameters in the CEMP is not sufficient for proper monitoring of the water quality during the construction phase of the project. Blackwater Gold's Response: Section 15.6 of the CEMP is intended to describe water quality monitoring associated with construction activities with a water feature interface on an as-needed basis (i.e. only for the duration of a specific activity), for example, a new bridge crossing. Section 7.3.1 of the Mine Site Water Management Plan and Discharge Management Plan provides details on the broad surface water quality monitoring program. The following has been added to Section 15.6 of the CEMP to make this distinction: "The mine site surface water quality monitoring program for Construction and Operations is presented in the MDSP (see Section 7.3 in Appendix 9-E)." Blackwater Gold references Section 7.3.1 of the MWWMP for this information but the MWWMP does not provide the information requested. To be clear, the comment is suggesting the addition of supplementary measurements to ensure the effectiveness of the proposed monitoring activities. The request is to address the concern in the CEMP.	Section 15.6.2 Mine Site Water Quality Monitoring has been added to specifically refer to where mine site monitoring will be completed (Mine Site Water Monitoring and Discharge Management [MSDP]Table 7.3-1), the frequency of monitoring (monthly), and parameters monitored (MSDP, Table 7.3-2). Section 15.6.2 states "Data analysis will include an evaluation of concentration trends and comparison to trigger levels identified in Section 9.3.2 (and see MSDP, Table 11-1)".	
127	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	Treatment Contingency Planning	According to the CEMP, contact water during the construction phase may contain high turbidity and dissolved metals from acid rock drainage. Pre-treatment of impacted streams or of stored TSF water may be required. Contingency treatment of the TSF is alluded to in Appendix B of the CEMP. However, CEMP does not provide significant description of the types of pre-treatment envisaged, triggers for their implementation, or timelines for deployment. Section 14.6 describes preventative and monitoring activities during construction but does not include water quality or treatment details. Recommendation: Please discuss conceptual description of pre-treatment envisaged, point of application (i.e. location of sedimentation ponds, lime addition systems), how these systems would be incorporated into contingency treatment plans, and triggers for deployment.	Section 8 of the Mine Site Water Management Plan and Discharge Management Plan is applicable to all Project phases and provides discharges to the environment (by phase), discharge management and associated monitoring requirements and is considered the authoritative source for contact water management. This is considered outside the scope of the CEMP and as such no changes have been made.	ERM

Blackwater Gold Project – CEMP Comment Tracking Table											
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ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Revised Section or Page	Comment Theme	Comment	Response	Author
127	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (December 2021)	Section 9		Treatment Contingency Planning	**Comment was not addressed.** Treatment Contingency Planning. The CEMP must include or refer to the description of pre-treatment and mitigation measures envisaged for contact water, points of application, and how these would be incorporated into contingency plans, and triggers for deployment. Blackwater Gold's Response: Section 8 of the Mine Site Water Management Plan and Discharge Management Plan is applicable to all Project phases and provides discharges to the environment (by phase), discharge management and associated monitoring requirements and is considered the authoritative source for contact water management. This is considered outside the scope of the CEMP and as such no changes have been made. BW Gold refers to the MWWMP for this information. However, the MWWMP does not provide this information. Specifically, no information on points of application, contingency plans and triggers can be found. The request is to address the concern in the CEMP.	Section 9.3.1 Sediment Control Ponds has been revised to incorporate where sediment control ponds (SCPs) will be constructed and how they will manage surface runoff during construction. Mitigation response implemented should the SCP discharge quality not meet proposed targets identified in MSDP, Table 8.2-2, Table 8.2-3, and Table 8.2-4. Management actions specific to SCP discharge quality provided in Section 9.3-1 are: • Implementing additional sediment and erosion controls; • Implementing localized pH-adjustment; • Routing water to contact water management pond (e.g., water management pond, supernatant ponds in the TSF) for temporary containment; and • Adding flocculant or other settling aids Section 9.3.2 Tailings Storage Facility Water Management has been added to discuss water management of site contact and non-contact water through construction. Within the TSF basin site contact and non-contact water will be collected and stored within the TSF (supernatant pond, TSF C Pond during construction) and/or the water management pond (WMP). Management of unplanned water release and water quality within the TSF C Pond and WMP will be in accordance with the MSDP (Sections 7.2.2, 7.2.5, and 11.0). Management actions include water treatment options (e.g., use of water treatment plant and consideration of lime dosing to re-establish neutral pH conditions in the pond).	
127	04-May-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (March 2022)	Section 9		Treatment Contingency Planning	Comment was not addressed CEMP must include or refer to the description of pre-treatment and mitigation measures envisaged for contact water, points of application, and how these would be incorporated into contingency plans, and triggers for deployment. While a list of mitigations is included, no information on details of these measures and implementation planning and schedule is included in the application. This information and planning are required to ensure the timely and efficient application of additional mitigation measures proposed.	See attached memo "Memo_R127_Source_CEMP comments"	
128	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	PAG Waste Rock during Construction	Waste rock classified as PAG1 and PAG2 are to be stored in the TSF under saturated conditions in the long term. Because potentially acid generating materials begin progressing towards onset of acid rock drainage when it is brought to the surface, it's important that this type of material be saturated well before the time of onset of ARD. During the construction phase, the TSF will be accumulating water. How much PAG1/PAG2 type waste rock is expected to be excavated during the construction phase? Will the TSF contain sufficient water that PAG1/PAG2 material generated during the construction phase be saturated prior to the estimated time for onset of ARD? Recommendation: The CEMP should discuss management of any PAG material and timelines for saturation in the TSF compared to the time for onset of ARD.	Table 3.5.3-2 of Chapter 3 (Mine Plan) provides the annual filling schedule for TSF C; by the end of Y-2, 564,932m^2 of waste rock will be placed in TSF C. The ML/ARD Management plan is intended to be considered the reference with respect to ARD management and is appended to the CEMP. The expected exposure periods are shown in Table 4.1-1 of the plan. The TSF will accumulate water during the Construction phase. Per Table 4.1-1, waste rock exposure is expected to be less than 1 month before submergence during Y-2 and Y-1.	ERM
128	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (December 2021)	Section 9.6		PAG Waste Rock during Construction	Comment was not addressed. PAG Waste Rock during Construction. The CEMP must discuss or reference information regarding the management of PAG material including the schedule of timelines for saturation in the TSF compared to the time for onset of ARD. Blackwater Gold's Response: Table 3.5.3-2 of Chapter 3 (Mine Plan) provides the annual filling schedule for TSF C; by the end of Y-2, 564,932 m^2 of waste rock will be placed in TSF C. The ML/ARD Management plan is intended to be considered the reference with respect to ARD management and is appended to the CEMP. The expected exposure periods are shown in Table 4.1-1 of the plan. The TSF will accumulate water during the Construction phase. Per Table 4.1-1, waste rock exposure is expected to be less than 1 month before submergence during Y-2 and Y-1. Blackwater Gold responded that all surface runoff from plant site grading, Open Pit development, TSF construction and waste rock storage area development will be directed to the TSF basin or other designed sediment control structures and monitored per Section 8 of the Mine Site Water Management Plan and referred to the Mine Plan (MP) for waste rock quantities by project stage. None of the responses provided or the documents referenced provide the information requested as to timelines for saturation of PAG material in TSF during the construction. The request is to address the concern in the CEMP.	To address reviewer comments the following paragraph in Section 9.6 was revised as follows: "From Year -2 to Year -1, approximately 1.2 Mt of PAG (PAG1, PAG2, and NAG3) waste rock will be mined and placed in the designated pre-production PAG disposal area at TSF C. The waste rock placement will be monitored to ensure it is not inadvertently re-directed to other construction sites. All PAG1, PAG2, and NAG3 waste rock will be stored under saturated conditions in the TSF in the long term. Specifically, PAG1 and PAG2 waste rock will be stored in the TSF which will ultimately be submerged by tailings slurry. The expected exposure periods during construction (Year -1 and Year -2) are less than a month (see ML/ARD Management Plan, Table 6.1-1). Based on the results from the kinetic test program (AMEC 2014), it is expected that ARD may develop locally in PAG domains within the TSF basin before flooding is achieved. This scenario is accounted for in the source term and water quality model. Waste rock classified as NAG3 will be used in construction of the TSF dams or otherwise stored in the TSF and submerged within five years of mining to reduce metal leaching."	
128	25-Jan-22	Indigenous Communities		LDN/UFN	Construction Environmental Management Plan	Section 9.6			Either the full plan is not appended or it is missing Table 4.1-1. Please provide reference to this in the CEMP.	The correct reference is Table 6.1-1 of the ML/ARD Management Plan and is referred to in Section 9.6 of the CEMP.	
129	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	Collaboration with the Nations for Environmental Hierarchy Decision-Making during Construction	The risk management approach included in the CEMP is based on the value ranking of species and the effectiveness of different mitigation measures. CEMP states that First Nations groups may be consulted when a conflict exists for managing two or more environmental constraints. It is requested that Blackwater work collaboratively with the Nations for decision making and implementation of the Environmental Hierarchy. Recommendation: The Nations must be regularly consulted when the Environmental Hierarchy decision-making process is used.	Comment noted. Section 8.1 has been revised as follows: "Aboriginal Groups will be consulted in the event that the decision hierarchy process is used. Additional qualified professionals and federal or provincial government agencies may also be consulted."	ERM
129	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A		Addressed.		
130	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	Section 8	Major Incidents Reporting	CEMP states that in the event of a major incident: "External agency and First Nation/ stakeholder notification may be required and will be conducted by BW Gold.". In the event of a major event, Blackwater must inform their Indigenous partners of the incident and any potential impact or risk to the environment or human health and safety. This approach also is beneficial in that First Nations groups will also be informed and can be involved in the subsequent remediation considerations. The Nations have provided comments on the mine emergency response plan document that relates to methods and triggers for communicating with First Nations in the event of environmental/safety incidents. Further comments on incident reporting and communication protocols will be provided in comments associated with the Accidents and Malfunctions Communications Plan. Recommendation: Blackwater's Indigenous partners must be informed of major incidents immediately after the necessary safety and mitigation plans are implemented.	Comment noted. The Accidents and Malfunctions Administration and Communication Plan documents the types of accidents or malfunctions that will be reported to Indigenous nations, along with reporting mechanisms and timelines and will be submitted for Indigenous nation review in accordance with the Document Submission Plan.	ERM

Blackwater Gold Project – CEMP Comment Tracking Table											
ADMIN	COMMENTS										
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130	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (December 2021)	Section 16.1.4		Major Incidents Reporting	Comment was not addressed. Major Incidents Reporting. Blackwater's Indigenous partners must be informed of major incidents immediately after the necessary safety and mitigation plans are implemented. Blackwater Gold's Response: Comment noted. The Accidents and Malfunctions Administration and Communication Plan documents the types of accidents or malfunctions that will be reported to Indigenous nations, along with reporting mechanisms and timelines and will be submitted for Indigenous nation review in accordance with the Document Submission Plan. Blackwater Gold references the Accidents and Malfunctions Administration and Communication Plan (AMACP). However, AMACP does not consider notifying the Indigenous Partners in the event of a major incident. Blackwater's Indigenous partners must be informed of major incidents immediately after the necessary safety and mitigation plans are implemented, this comment applies to the AMACP too.	Section 7 (Table 7-1 - Communication Protocol Summary) of the A&MCP includes specific notification requirements to Indigenous Partners for all types of events. Each type of 'event is assigned a consequence level and a period of time required to be met for notification, who the notification needs to be made to and specifically what type of notification needs to be made. The A&MCP is referenced in Section 16.2.3.3 of the CEMP.	BW Gold
140	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	Spill Response and Management Specific to Cyanide Reagents	Considering that construction activities for the Blackwater project continue during the operations phase, specific instructions and measures related to cyanide reagents and spills must be included in the CEMP or referenced via the MERP and CMP documents. CEMP describes the spill/incident prevention and response plan in detail in Section 9. However, the plan does not include specific measures for cyanide reagents. Source recommended that such specific measures be added to the Mine Emergency Response Plan (MERP) as well as the Cyanide Management Plan (CMP). In addition, First Nations representatives must be notified of major and minor cyanide spills. Recommendation: Spill and incident response plans and instructions specific to cyanide reagents must be included or referenced in the CEMP including notifying First Nations representatives.	Comment noted. As part of the overall Blackwater EMS, the Cyanide Management Plan is considered the reference document with respect to cyanide management and emergency response. As with hydrocarbon or hazardous materials release, detailed response actions are found in relevant management plans and referenced in the CEMP. With direct relevance to construction activities, the circuits which use cyanide will be fully constructed prior to storage or use of cyanide during mill operations. At that time, post-construction during Operations ramp-up the Cyanide Management Plan (CMP; Appendix 9-M) has been developed to meet the performance goals set by the International Cyanide Management Code Standards of Practice and follows the Principles and Standards of Practice of the Code for the manufacture, transport and use of cyanide in the production of gold. The Cyanide Management Plan and associated emergency response plans are applicable to all construction activities during the Operation phase."	ERM
140	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	Spill Response and Management Specific to Cyanide Reagents	Addressed.		
141	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	N/A	N/A	Record Keeping and Reporting	The CEMP states that records and monitoring data will be entered into a suitable electronic database after quality control checks are completed. It would be beneficial for the Nations and their representatives to have access to this database to perform independent review and quality control checks. In addition, a copy of the monthly Environmental Monitoring report must be sent to the Nations to include a summary of work progress, challenges and plans, and any non-compliance issues. Recommendation: The environmental monitoring database must be made accessible to the Nations and their representatives to perform independent quality control checks and reviews. The Nations must receive a copy of the monthly Environmental Monitoring report. Recent monthly monitoring reports should be included as a standing agenda item for discussion at meetings of the Environmental Management Committee.	BW Gold will consider granting access to environmental record and monitoring database(s) taking into consideration its internal governance and privacy policies. Key database outputs (i.e. summaries or statistics) will be incorporated into relevant monthly or annual reports distributed to Indigenous nations. With regards to monthly report distribution, the following has been added to Section 16.2.2 (Environmental Monitoring Committee): "Monthly reports will be distributed to committee members a minimum of 5 business days prior to the next scheduled meeting (when possible) and will be a standing agenda item for discussion.	ERM
141	5-Jan-22	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (December 2021)	Section 16.3		Record Keeping and Reporting	**Comment was not addressed.** Record Keeping and Reporting. It is recommended that the Monitoring database be made accessible to First Nations so they can perform independent quality control checks and reviews. Blackwater Gold's Response: BW Gold will consider granting access to environmental records and monitoring database(s) taking into consideration its internal governance and privacy policies. Key database outputs (i.e. summaries or statistics) will be incorporated into relevant monthly or annual reports distributed to Indigenous nations. With regards to monthly report distribution, the following has been added to Section 16.2.2 (Environmental Monitoring Committee): "Monthly reports will be distributed to committee members a minimum of 5 business days prior to the next scheduled meeting and will be a standing agenda item for discussion. Blackwater Gold is suggesting only key database outputs (i.e. summaries or statistics) will be incorporated into relevant monthly or annual reports distributed to Indigenous nations taking into consideration its internal governance and privacy policies.	BW Gold will make raw outputs from monitoring databases accessible to Indigenous nations after the data has been properly QAQC'ed by onsite staff and potentially external consultants upon request. The following text has been added to Section 16.3: "Monitoring data will be stored for 25 years beyond decommissioning, and be made available for review upon request for regulatory inspections and for Indigenous auditing purposes."	
142	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	Table 8.6-1	Table 9.6-1	Use of Pesticide/Herbicide	Table 8.6-1 of the CEMP includes 'Comply with the StFN herbicide use policy in StFN territory. Nadleh First Nation has a strict no herbicide/pesticide policy for the territory. Recommendation: Please include reference to Nadleh First Nation's herbicide/pesticide policy in Table 8.6-1.	The mitigation measure in Table 9.6-1 has been revised as follows: "Comply with the StFN and NWFN no herbicide/pesticide use policy within the respective territories"	ERM
142	25-Jan-22	Indigenous Communities		LDN/UFN	Construction Environmental Management Plan	Table 8.6-1	Table 9.6-1	Use of Pesticide/Herbicide	This reference/sentence is missing from the report.	The final CEMP refers the reader to the IPMP for details on control and eradication of invasive plants. Section 8.2.2.1 of the IPMP includes the following: "Comply with the StFN and NWFN Nation herbicide policy in their Traditional Territories"	
143	20-Aug-21	Indigenous Communities		Source Environmental Associates	Construction Environmental Management Plan (June 2021)	Table 8.8-1	N/A	Waterbirds Research and Monitoring	Table 8.8-1 of the CEMP includes reference to development of a research and monitoring program for assessing the impact of electromagnetic fields on birds near the transmission line (page 8-27). Information Request: Please comment on the status of the development of the research and monitoring program on the impact of EMF on birds.	Section 8.7.3 of the Wildlife Mitigation and Monitoring Plan provides an update and proposed general approach to undertaking the EMF study and monitoring program. A research program will be established in consultation with the Nadleh Whut'en and Stellat'en First Nations. The program will include a literature review to examine the potential scale and severity of EMF effects on birds. This literature review will be shared with the Nadleh Whut'en and Stellat'en First Nations. Based on the results of this literature review, a decision will be made as to whether any monitoring programs are required.	ERM
144	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Table 8.1-1 indicates site specific measures for the crossing the stellako and tower placement, given the layout has been done what are the specific measures employed (such as set back distances for poles).	Design-related mitigation measures, including the mitigation measure referenced by the reviewer, have been removed from the CEMP. Detailed design of the Stellako River crossing will be provided in the License of Occupation application.	ERM
145	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				8.3 indicates that the permenent stock piles will be covered with a minimum of 30 cms of overburden and revegetated for reclamation purposes, how does this plan contribute to return of the site to functional habitat as indicated in the CMMP?	Reference to covering NAG4 and NAG5 waste rock stockpiles with 30 cm of overburden has been removed from the CEMP, and is addressed in the ML/ARD Management Plan and Reclamation and Closure Plan.	ERM
146	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Please clarify the "Transplantation of healthy trees from impacted areas to undisturbed areas or designated reclamation areas, as will be described in the Reclamation and Closure Plan"	This commitment has been removed from the final CEMP and transplantation of trees is not a component of the final Reclamation and Closure Plan (vegetation sources are described in Section 4.2.3.2).	ERM
147	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Motion activated lighting is not noted in the WMMP, please make the plans consistant.	Motion activated lighting is listed as a potential mitigation in Section 3.1 of the WMMP.	ERM
148	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Reclimation is not restoration.	This comment is acknowledged. Restoration has been removed throughout the document and reclamation is used where appropriate.	ERM

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149	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				When is the access management plan to be developed?	The access management plan is integrated into the Mine Site Traffic Control Plan (MA/EMA Application Appendix 9-K).	ERM
150	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Restoration of disturbed habitats at the mine site for caribou and other wildlife contradicts some of the other statements regarding reclimation of the mine site in	Mitigation measures specific to Project phases other than Construction have been removed from this CEMP. Project reclamation will be in accordance with the Reclamation and Closure Plan.	ERM
151	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				The use of current telemetry to assess seasonal movements of caribou relitive to the project is likely not appropriate.	This statement has been removed from the final CEMP, and is addressed in the WMMP.	ERM
152	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				The QP's work will consider locations with a higher probability of mortality for birds, not just wetlands. Proposed monitoring locations, timing of monitoring, and an adaptive management plan including triggers for action will be outlined in the WMMP as part of the required submission during permitting - the locations are not specified in the WMMP.	This statement referring to bird monitoring locations and adaptive management has been removed from the final CEMP because it is specific to Operations. Monitoring associated with this mitigation measures associated with the adaptive management is included in WMMP Table 4.10-1 and survey details provided in Section 4.7.3.6.	ERM
153	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				The description for CWD retention as per the WMMP - WMMP states "Locations of coarse woody debris piles/retention will be directed by a QP on a site specific basis." Why not use the WMMP wording?	This mitigation measure has been revised in Table 9.11-1 for consistency with the WMMP and has been revised as follows "Retain coarse woody debris in accordance with the Coarse Woody Debris Management SOP".	ERM
154	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				How will forest edge be enhanced? This is not described in the WMMP either.	Reference to enhancement of the forest edge has been removed from Table 9.11-1 and following measure is included "Mitigate for edge effects created from clearing the forest in accordance with WMMP, Section 3.3.2". Discussion of maintenance of forest edge is provided in Section 3.3.2 and Section 4.6.3 of the WMMP.	ERM
155	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Implement adaptive management measures to deter water birds and amphibians from the TSF and pit lake waters, as will be described in the Wildlife Management and Monitoring Plan" - this is noted in the WMMP but details are scant. monitoring for amphibian impacts are likely not adequate.	This mitigation measure has been removed from the final CEMP as it relates to Operations, not Construction. Section 3.5.1 of the final WMMP describes considerations for mitigation and monitoring at the TSF and other Project waterbodies.	ERM
156	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Implement a salvage plan that identifies relocation sites and outlines salvage operations prior to Construction during breeding season in potential Western toad habitat" contradicts the next line - restricting clearing to outside the breeding season and the WMMP, and implications for Federal condition 8.9 and 8.10.	Amphibians will be managed in accordance with DS Conditions 8.10 and 8.11. For consistency with the final WMMP, Table 9.11-1 of the CEMP has been revised as follows: "• As described in DS Condition 8.10, avoidance will include no-work buffers surrounding known breeding ponds and taking into account BC Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia (MOE 2014b), which recommends a 30-150 m buffer zone. • As described in DS Condition 8.11, if avoidance is not possible and salvage is required, it will be conducted following Best Management Practices for Amphibian and Reptile Salvages in British Columbia (MFLNRO 2016) • DS Condition 8.11 indicates that toads will be salvaged from on-site breeding ponds prior to clearing activities that cannot be scheduled outside of sensitive periods. Prior to an amphibian salvage, a salvage SOP will be produced."	ERM
157	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Salvage activities will require wildlife act permits and adherance to the conditions in those permits.	Comment acknowledged.	ERM
158	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Amphibians are wildlife, as such are given the Right of way. Amphibian mortality on roads may require assessment of adherance to the right of way to wildlife.	Comment acknowledged. Table 9.11-1 has been revised to include a "Wildlife Activity on Roadways" mitigation section for consistency with the final WMMP, which is applicable to all wildlife including amphibians.	ERM
159	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Set back distances for nests, hibernacula, dens etc should be specified on the mitigation Table 8.8-1.	Setback distances to furbearer and grizzly dens have been added to Table 9.11-1. Setbacks to hibernacula will be determined in consultation with Aboriginal and Indigenous groups and relevant authorities, and considering recommendations in the Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area (BC FLNRO 2014).	ERM
160	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Use vegetation and coarse woody debris and other approaches to form visual barriers on cut lines, trails or other linear features to reduce changes in predator-prey dynamics pursuant to the WMMP" this is not fully explained in the WMMP; how will the change in predator prey dynamic be assessed?	This mitigation measure has been revised for consistency with the final WMMP, as follows: "Retain coarse woody debris in accordance with the Coarse Woody Debris Management SOP." Evaluation of the impact on predator prey dynamic is outside the scope of this CEMP. Monitoring and reporting on the coarse woody debris retention is provided in WMMP Table 4.10-1.	ERM
161	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Restore disturbed habitats at mine closure or develop habitats capable of supporting moose pursuant to the RCP " how does this fit with the CMMP?	This mitigation measure has been removed from the final CEMP as it relates to Closure.	ERM
162	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Implement adaptive management to manage alternate prey habitat, wolf access or other similar measures, as described in the WMMP." Where is this described in	This mitigation measure has been removed from the final CEMP for consistency with the WMMP.	ERM
163	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Staff will be made aware of any locations of high animal activity on access roads and the appropriate actions to be taken" please define appropriate actions or who will determine what those appropriate actions might be.	The following has been added to Table 9.11-1: "The Environmental Manager, in consultation with the qualified professional, will determine appropriate actions depending on the circumstance and maintain overall responsibility for implementation of the recommendations."	ERM
164	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Why Shed surveys for moose activity?	This mitigation measure has been removed from the final CEMP, and is in alignment with construction-phase mitigation measures presented in the WMMP.	ERM
165	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"An access management plan will be developed for the project, with consideration of waterbird predator activity" please clarify.	This mitigation measure has been removed from the final CEMP, and is in alignment with construction-phase mitigation measures presented in the WMMP.	ERM
166	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"Habituated animals will be deterred for their own safety following a pre-approved plan, reviewed by the provincial Conservation officer Service" This probably should not be in the waterfowl section - also it would require federal involvement waterfowl in this context would be under a federal juristiction.	This mitigation measure has been removed from the final CEMP, and is in alignment with construction-phase mitigation measures presented in the WMMP.	ERM
167	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				Have low risk timing windows for invertebrates been identified?	Timing restriction periods have been developed using the following sources in accordance with the WMMP and have been provided in Section 13.1: • BC MOE & BC FLNRO. 2014. Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia • BC FLNRO. 2016. Best Management Practices for Amphibian and Reptile Salvages in British Columbia. BC Ministry of Forests, Lands and Natural Resource Operations. • ECCC. 2016. Management Plan for the Western Toad (Anaxyrus boreas) in Canada [Proposed]. Environment and Climate Change Canada: Ottawa.	ERM
168	3-Nov-21	FLNRORD	Table	Duncan McColl	Construction Environmental Management Plan (August 2021)				"The Contractor's Environmental Representative will be familiar with pre-construction survey requirements and management plans which may require pre-construction surveys, and ensure that construction scheduling incorporates sufficient lead time for QPs to complete surveys: " Has sufficient lead time for QPs to complete surveys been planned for?	A prime contractor has not been selected. This statement is intended to ensure the prime contractor schedule will consider the need for environmental-related surveys. Regardless, many wildlife pre-construction surveys commenced in 2021 while others will continue into 2022. BW Gold will work with the prime contractor upon selection to align scheduling needs.	ERM
169	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan			General Consultation Comments	Records provided do not demonstrate that ALL parties listed in Condition 13 were provided the plan for review (email or other records).	The B.1 (June 2021) version of the plan was provided to LDN, UFN, Saik'uz (SFN), Stellat'en (StFN), Nadleh Whut'en (NWFN), and Nazko for review on June 11, 2021. That same B.1 version was also provided to EMLI, FLNRORD and ENV on August 11, 2021. The C.1 (November 2021) version of the plan was submitted as part of the Blackwater joint Mines Act/EMA permit application on November 29, 2021 and was distributed to LDN, UFN, SFN, StFN, NWFN, EMLI, ENV and FLNRORD. The C.1 (November 2021) version of the plan was then submitted as a stand-alone plan to LDN, UFN, SFN, StFN, NWFN, Nazko, EAO, EMLI, ENV and FLNRORD on December 1, 2021 and an ITT with responses to all comments received during consultation on the plan was provided to these same parties on December 29, 2021.	BW Gold
170	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan			General Consultation Comments	Records provided do not demonstrate that the Holder provided the responses to comments to those groups that provided comments (a table column with responses is not sufficient).	In addition to written responses being provided to groups that provided comments (September 22, 2021), BW Gold engaged on several occasions with groups to review the plan and walk through comments and responses. Please refer to consultation summary being provided along with the updated plan in March 2022.	BW Gold

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171	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan			General Consultation Comments	Consultation record shows that the different parties were provided different CEMP versions.	The B.1 (June 2021) version of the plan was provided to LDN, UFN, Saik'uz (SFN), Stellat'en (StFN), Nadleh Whut'en (NWFN), and Nazko for review on June 11, 2021. That same B.1 version was also provided to EMLI, FLNRORD and ENV on August 11, 2021. The C.1 (November 2021) version of the plan was submitted as part of the Blackwater joint Mines Act/EMA permit application on November 29, 2021 and was distributed to LDN, UFN, SFN, StFN, NWFN, EMLI, ENV and FLNRORD. The C.1 (November 2021) version of the plan was then submitted as a stand-alone plan to LDN, UFN, SFN, StFN, NWFN, Nazko, EAO, EMLI, ENV and FLNRORD on December 1, 2021 and an ITT with responses to all comments received during consultation on the plan was provided to these same parties on December 29, 2021.	ERM
172	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan			General Consultation Comments	Unclear how much time the parties to be consulted were provided for the plan review.	The Nations were provided a minimum of 30 days to review and provide comments. LDN, UFN, Saik'uz (SFN), Stellat'en (StFN), Nadleh Whut'en (NWFN), and Nazko were provided with the draft B.1 CEMP on June 11, 2021. The draft was provided to the Indigenous nations for a 30 day consultation period. Comments were received in two batches, one batch on June 29 and one batch on August 20. EMLI, FLNRORD and ENV were provided with the draft B.1 CEMP on August 11, 2021. BW Gold checked in on October 12 on the status of comments, and gave the parties until October 29 to comment. EMLI responded on November 1, FLNRORD on November 3 and ENV on November 10. EMLI and ENV responded that they would reserve comment until the review of the joint Mines Act/EMA permit application and FLNRORD provided comment. EMLI and ENV responded that they would reserve comment until the review of the joint Mines Act/EMA permit application and FLNRORD provided comment. Responses from the different government agencies are summarized in the consultation summary letter being provided along with this ITT. The C.1 version of the CEMP was submitted as a stand-alone plan on December 1, 2021.	ERM
173	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan		Appendix A	General Comments	CEMP, Appendix A, Table of Concordance is not accurate for the current CEMP version.	The table of concordance with EAC #M19-01, Appendix A, has been revised to reflect the current CEMP version.	ERM
174	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan		Section 2	General Comments	Documents referenced in the CEMP that address Condition 13 requirements were not provided or appended. To verify that all condition requirements were addressed, the documents referenced in the CEMP must be provided.	Project documents referenced in the CEMP have been listed in Section 2 and included as attachments to the CEMP.	ERM
175	25-Jan-22	EAO	Email	Lori Carter	Construction Environmental Management Plan		Section 9	General Comments	Many measures lack clarity, measurability, and/or accountability.	Many mitigation measures in Section 9 have been revised to incorporate SMART (Specific, Measurable, Achievable, Realistic, and Time-bound) objectives. While it's not practical to list every edit, two examples are provided below. "Locate fuel storage and refueling activities outside riparian areas. " has been revised to: "Locate fuel storage and refueling activities outside any wetland RMA, in accordance with the Riparian Area Management SOP. " "Minimize drop height from loaders and excavators (shovels) to the truck." has been revised to: "Employees involved in material handling or management will receive training by a qualified person on the importance of minimizing material drop height (from excavator to truck, conveyor to stockpile, etc.) to reduce fugitive dust, noise, and vibration."	ERM
176	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-1		Section 9.9	SOPs	In the 5th point in table 9.9-1 various SOP's are mentioned as a reference for clearing around sensitive environmental features. Where are these SOP's found? Suggest adding the CEMP to make it clear what this point is referring to	Table 2-1 is now provided in the CEMP indicating the standard operating procedures referred to in the CEMP and the management plan that they are provided in.	ERM
177	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-1		Section 9.9	SOPs	Similar comment from above. Bullet 9 refers to the Coarse Woody Debris Management SOP. Where is this found? What management plan?	See response to comment #176. The Coarse Woody Debris Management SOP is provided in the Vegetation Management Plan [Attachment 17] provided in the EAO Submission CEMP Attachments.	ERM
178	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-1		Section 9.9	soil degradation and erosion	"Mminize soil degradation and erosion by leaving stumps and understorey vegetation intact where possible and adhering to the SMP, SEPSCP, and RCP" This implies that these plans discuss leaving stumps and understorey vegetation, however no mention of this is within the plans. Please provide more precise direction on where this information is discussed.	The mention of the plans was intended to indicate that procedures identified in those plans should also be followed (in addition to potentially leaving stumps and understorey) to minimize soil degradation and erosion. The CEMP Table 9.9-1 has been revised as follows: "Minimize soil degradation and erosion by leaving stumps and understory vegetation intact where possible. Soil degradation and erosion will also be minimized in adhering to the mitigations identified in the SMP, SEPSCP, and RCP."	ERM
179	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-2		Section 9.9	Riparian area SOP	The first and second bullets in this table states "in accordance with the Riparian Area Management SOP". Where can we find this? It is not included in the Wetland Management Plan.	See response to comment #176. The Riparian Area Management SOP is provided in the Vegetation Management Plan [Attachment 17] provided in the EAO Submission CEMP Attachments..	ERM
180	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-2		Section 9.9	Herbicide application	Although Table 8.2-3 of the IPMP is referenced correctly, additional comments have arisen from the table and should be addressed.	BW Gold will respond to the additional comments made on Table 8.2-3 of the IPMP in the comment tracking table specific to the plan.	ERM
181	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-2		Section 9.9	Nesting birds	Table 3.3-1 in the WMMP highlights the bird window for Clark's Nutcracker starts April 15th. Explain why Table 9.9-2 suggests vegetation clearing will be undertaken until April 30th.	Table 9.9-2 of the CEMP has been updated as follows: "To protect nesting birds, vegetation clearing will only be undertaken during the period of August 1 through to April 30 to avoid contravention of Section 34 of the Wildlife Act and outside of sensitive timing windows identified in Table 13.1-1, where possible. If clearing must occur during sensitive timing windows, pre-clearing surveys and mitigations will be implemented. Mitigation measures, including buffer zones, will be outlined by a qualified professional on a site-specific basis following a risk-based assessment of the species in question, the habitat, and the type of Project activity and its potential to disturb wildlife. See Section 3.3.1 in the WMMP for additional information on pre-clearing and sensitive timing windows." Table 13.1-1 of the CEMP is the same table (3.3-1) presented in the WMMP indicating the sensitive timing windows. The timing of vegetation clearing presented in the updated CEMP is consistent with that presented in Section 3.3.1 of the WMMP.	ERM
182	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-3		Section 9.9	Invasive plant management SOP	Various comments in the table state "in accordance with the Invasive Plan Management SOP". Where cane this be found? In the IPMP it states "The SOP iwll be available upon request and will be included in the CEMP". The SOP is not included in the CEMP.	See response to comment #176. The Invasive Plant Management SOP is provided in the Invasive Plant Management Plan [Attachment 7] provided in the EAO Submission CEMP Attachments.	ERM
183	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-3		Section 9.9	Invasive plant monitoring SOP	This table states " maintain newly disturbed sites free of invasive plant in accordance with the invasive plant monitoring SOP". Where is this found? It is not within CEMP or the	See response to comment #176. The Invasive Plant Monitoring SOP is provided in the Invasive Plant Management Plan [Attachment 7] provided in the EAO Submission CEMP Attachments.	ERM

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184	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-3		Section 9.9	Invasive plant treatment	"use spot applications and avoid broad spraying of herbicides, especially adjacent to listed plant communities or plants and riparian zones in accordance with the IPM SOP" Where is the SOP? Spot treatments and broad application methods have not been specifically discussed in the IPMP, rather, a much broader paragraph addressing herbicide treatment and its purpose. If treatment is addressed in the SOP, this must be provided, reviewed, and included in either the CEMP, IPMP, or both.	See response to comment #176. The Invasive Plant Management SOP is provided in the Invasive Plant Management Plan [Attachment 7] provided in the EAO Submission CEMP Attachments. In addition as identified in the IPMP Section 8.22: "Herbicide selection will be informed by consultation with Indigenous nations and CCCIPC as well as site conditions, target species and treatment objectives. Herbicide use will meet the StFN and NWFN herbicide use policies. Herbicide application must comply with BC's Integrated Pest Management Act and be documented using the BC MFLNRO Invasive Plant Chemical & Mechanical Treatment Record (BC MOFR 2010b). Pesticides will be purchased from a licensed vendor and will only be applied by those with training and certification. Appendix F identifies requirements in the Integrated Pest Management Regulation related to herbicide use and handling. Herbicides will not be used under the following conditions: • When it is raining; • When ground winds are over 8 km/h; • When site conditions prevent the use of herbicides (e.g., coarse textured soils); and • When the benefit of using a herbicide is negligible. Any herbicide application will be targeted rather than broad spraying to reduce the amount of herbicide used and to minimize adverse effects to the surrounding environment." Table 8.2-3 of the IPMP also identifies distances for "no treatment zones" (NTZ) and "pesticide free zones" (PFZ) as prescribed by the Integrated Pest Management Act. To maintain PFZs as pesticide-free, an adequate buffer zone must be implemented around the PFZ. This zone must account for sloped topography, weather at the time of treatment, or any other site factor that could cause the spread of the pesticides.	ERM
185	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 9.9-3		Section 9.9	invasive plant spread	The last measure in the table discusses the spread of invasive plants. It is widely known that vehicles are a vector of spread for inasvive species, especially when moving dirt that contains seeds, as many are viable for numerous years. Portable wash stations should be utilized in areas when equipment is traveling through or disturbing the ground where known infestations occur, rather than only being implemented if new infestations arise. Also, what is meant by 'blocking off the infestation'? Do you mean stopping all equipment from entering a newly observed infestation, then completing a survey and evaluating necesary treatments? Please clarify this point.	Table 9.9-3 in the CEMP has been revised as follows: "If vehicles or earth moving equipment can be confirmed as causing the spread of invasive plants or are working in areas of known infestations the following may be implemented, subject to the direction of a qualified person: a quarantine area may be established to block access to the infested area, treatment and control measures in the quarantine area, and use of portable wash stations. "	ERM
186	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 15.7-1		Section 15.7	measurable parameter	For post clearing revegetation, please clarify that one of the measurable parameters is data collection at the installed vegetation plots. Currently it is unclear.	Table 15.7-1 in the CEMP now indicates that the following measures will be assessed at revegetation plots: "Vegetation species cover, composition, diversity and, invasive plant species"	ERM
187	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 15.7-1		Section 15.7		"periodic inspections of the re-vegetated area" Please clarify what is meant by 'periodic'. Every month? 6 months? Provide more detailed parameters.	Table 15.7-1 in the CEMP has been revised as follows:"Annual inspections of the re-vegetated areas to assess performance objectives (including photos) compared to prescription targets"	ERM
188	08-Apr-22	Indigenous Communities	Table	LDN/UFN	Table 15.7-1		Section 15.7	measurable parameter frequency	What is meant by a variable frequency? Please provide more clarification of what this means as it is currently left open to interpretation	The following footnote is now provided in Table 15.7-1 to clarify the variable frequency monitorint:"A variable frequency indicates monitoring will be completed as required (e.g., prior to a clearing event or following completion of management actions) as determined by a qualified professional"	ERM
189	11-Apr-22	Indigenous Communities	Table	LDN/UFN	page 4-5		Section 4.5	Inaccurate description of caribou	The caribou information is BW previous commitment to caribou, this needs updfated with BW current commitment which has substantially larger offset ratios and montary commitments to restoration (c. 2.8 millio**n).** Considering this the following statement is no longer useable **- While BW Gold acknowledges potential uncertainty, the weight of evidence indicates that the Project will not interact with caribou or consistently occupy caribou habitat.**	Section 4.5.3 of the CEMP has been updated to reflect the most recent version of the CMMP. The sentence "While BW Gold acknowledges potential uncertainty, the weight of evidence indicates that the Project will not interact with caribou or consistently occupy caribou habitat. " has been removed.	ERM
190	11-Apr-22	Indigenous Communities	Table	LDN/UFN	page 4-5		Section 4.5	caribou suggested alternatives	you should say the site overlaps Matrix 1 caribou habitat, however the habitat is currently rarely used by caribou due to forestry habitat disturbance restricting caribou access to Mount Davidson.	The following sentence has been added to Section 4.5.3 of the CEMP "The Project overlaps with Matrix 1 caribou habitat, however, the habitat is rarely used by caribou, likely due to forestry disturbance restricting caribou access to Mount Davidson."	ERM
191	20-Apr-22	Indigenous Communities	Table	LDN/UFN	page 4-5		Section 4.5	Bats inaccurate information	Please refer to the new WMMP to update how bats will be offset, habitat offsetting has also been specified in the NEW WMMP .	Section 4.5.4 has been updated for consistency with version D.1 of the WMMP submitted April 2022.	ERM
192	20-Apr-22	Indigenous Communities	Table	LDN/UFN	page 4-6		Section 4.5	Bats inaccurate information	You mention bat surveys will be conducted in 2021 can you update with the plans for bat work in 2022.	The following sentence has been added to Section 4.5.4 for consistency with version D.1 of the WMMP submit April 2022: " A follow-up monitoring program for little brown myotis and northern myotis will be implemented during construction, operations and closure to comply with DS Condition 8.22 and to address EAC Condition 23h (requirement of a subcomponent plan for bats) and recommendations from ECCC made on February 28, 2022."	ERM
193	20-Apr-22	Indigenous Communities	Table	LDN/UFN	Page 9-18		Section 9	Invasive species protocols	As invasive species are found throughout the province, it would be clearer if you just say 'All staff will follow vehicle and equipment cleaning procedures, after working in offsite areas areas (outside of regional study area) in accordance with IPMP Section 8.2.1. This would follow a better avoidance strategy.	The intent of the mitigation measure is to require equipment cleaning after work in areas with known invasive plants. The mitigation measure in General Measures/Equipment Use Mobile equipment should arrive on site clean and free of all material, debris, and vegetation, or be cleaned in a designated location prior to unloading (IPMP, Section 8.2.1) is the overall measure requiring equipment to arrive on site clean.	ERM
194	20-Apr-22	Indigenous Communities	Table	LDN/UFN			Section 13	Beaver timing window	As you have beavers in the mine site should you add timing windows to the table for beaver? I am unsure if you are excempt?	The following statement has been added to the CEMP to address beavers during construction: "The provincial commitments on pre-clearing for furbearers requires adherence to the Compendium of Wildlife Guidelines (BC FLNRO 2014) which does not indicate sensitive time periods for beavers. However, beaver lodges are protected under the Wildlife Act and removal of a beaver lodge requires a permit. The BC Code of Practice states that alteration or removal of a beaver dam is permitted under the Wildlife Act "to provide irrigation or drainage under lawful authority for the protection of property" and under the Water Act for drainage purposes with specific restrictions. Therefore beaver dams less than one year old on a constructed ditch may be removed by a landowner as required (https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/water/drainage-management-guide/543110-1_beaver_dam_management-drainage_guide_factsheet_no16.pdf). If a beaver lodge is identified, it will be reported to the EM and a site-specific management plan will be developed and implemented. The site specific management plan would also conform with the DFO Code of Practice for beaver dam removal (https://www.dfo-mpo.gc.ca/pnw-ppe/codes/beaver-dam-barrage-castor-eng.html)"	
195	20-Apr-22	Indigenous Communities	Table	Okane			Section 9.2	Erosion and sediment control	Sample field fit technologies should be outlined so the degree of effort is provided, in lieu of the SEPCSP actually being provided	The SEPCSP will be provided as part of the construction contract documents.	ERM
196	20-Apr-22	Indigenous Communities	Table	Okane			Section 9.6	ML/ARD	Although the storage of PAG material outside the TSF in Years -1 and -2 has been accounted for in the source term and water quality model, is there not an opportunity to place this material on the LGO liner or similar to minimize the production of ML/ARD?	BW Gold cannot commit to placement of PAG waste rock onto the LGO liner during years -1 and -2 due to the sequencing of construction of the LGO pad liner versus inherent unknowns in the release of PAG rock from the open pit. PAG waste rock will be placed into the TSF as described in Section 9.6.	BW Gold
197	20-Apr-22	Indigenous Communities	Table	Okane			Section 15.8.1	Wetlands Management	It is not obvious from this section that the WMOP is to be completely re-written following the 2022 pre-construction surveys. This should be added as a clear deliverable	The following sentence has been added to Section 15.8.1 of the CEMP "The WMOP will be updated in 2022 to incorporate additional information provided by the additional 2022 baseline programs and will address the full scope of project development construction activities."	ERM

Exhibit 3
Fish Offsetting Plan (ITT)

Blackwater |											
ADMIN	COMMENTS										
ID	Comment Date	Reviewer Agency	Reviewer Name	Application Document	Application Section or Page	Nation comments	BW Gold Response	BW Gold 2nd comment	LDN/UFN - October 26, 2022	BW Gold Response	DFO comment
1	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)		Inconsistent use of "nations" and "Nations" throughout the document Little to no consideration of FN input, TEK, or benefits to the Nations through offsetting Inconsistent use of names for the LSA (e.g., aquatic LSA, Blackwater LSA)	Terminology will be reviewed for consistency and updates will be made. Section 4 describes the fisheries-specific consultation undertaken with First Nations on the fisheries offsetting process. BW Gold and its consultants are engaged in ongoing, frequent consultation with First Nations and their consultants. The ongoing FAAA review and revision is a key component of that process. We acknowledge that First Nation input and Traditional Ecological Knowledge will help strengthen the offsetting plan and increase the likelihood of success of the offsetting. To that end, feedback provided on this application and on multiple other fisheries-related documents is highly valued, and is being incorporated into future document revisions.	-	There are still some inconsistent uses of terminology: -mine site LSA and Blackwater LSA both still used -please capitalize "nation" in Indigenous Nation at the bottom of page 92 of the June 2022 FAAA. With respect to FN input, incorporation of TEK, and benefits to the Nations, this comment will remain open until all other comments are resolved, and LDN/UFN both feel this application sufficiently considers Indigenous perspectives as it relates to them.	The cited terminology has been corrected in the revised document.	See proponent response.
2	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	3.3.1.3	"Reclamation objectives will consider land and resource management objectives and strategies in the Vanderhoof Land and Resource Management Plan" end land use objectives for the reclamation and closure of the mine site have been updated - please edit	Section 3.3.1.3 will be updated with revised information from reclamation and closure plan updates.	-	Aside from changing the section number from 3.3.1.3 to 3.3.3, there has been no change to the text.	The requested change has been made in Section 3.3.3 of the revised document.	See proponent response.
3	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	3.3.1.3	"The plan will include strategies for temporary closure and premature closure" need to confirm this is in the updated RCP	Section 3.3.1.3 will be updated with revised information from reclamation and closure plan updates.	-	Aside from changing the section number from 3.3.1.3 to 3.3.3, there has been no change to the text. Can you clarify whether there will be strategies for temporary closure or premature closure in the RCP. If not, why?	The requested change has been made in Section 3.3.3 of the revised document, based on information from Appendix 4-J Temporary Shutdown, of the joint Mines Act - Environmental Management Act Application.	See proponent response.
7	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.5.1	Brassy minnow may be found in wetlands that are hydraulically connected to Davidson and Creek 661 - were these wetland surveyed for presence/absence as well?	Very limited capture information is available for Brassy Minnow in the baseline reports. No reports of Brassy Minnow capture were identified in wetlands or ponds in the LSA/RSA. Brassy Minnow were identified by minnow trapping in Tatelkuz Lake. Generally, potential fish-bearing waterbodies, including streams, ponds, and lakes were thoroughly assessed for fish presence by qualified professionals, in accordance with a detailed sampling design. Where fish presence could not be disproven via multiple sampling methods in different seasons, a conservative fish-bearing status was assigned to the waterbody. While the possibility exists that Brassy Minnow (or any other fish species) are present in wetlands that are hydraulically connected to fish-bearing waters, it is unlikely that they were overlooked during baseline surveys.	Very limited capture information is available for Brassy Minnow in the baseline reports. No reports of Brassy Minnow capture were identified in wetlands or ponds in the LSA/RSA, including Reach 3 of Davidson Creek which is classified as a low-gradient wetland. Brassy Minnow were identified by minnow trapping in Tatelkuz Lake. Generally, potential fish-bearing waterbodies, including streams, ponds, and lakes were thoroughly assessed for fish presence by qualified professionals, in accordance with a detailed sampling design. Where fish presence could not be disproven via multiple sampling methods in different seasons, a conservative fish-bearing status was assigned to the waterbody. While the possibility exists that Brassy Minnow (or any other fish species) are present in wetlands that are hydraulically connected to fish-bearing waters, it is unlikely that they were overlooked during baseline surveys.	The proponent's response is vague. Since wetlands were not sampled for Brassy Minnow, there are concerns about their presence in wetlands to be impacted/destroyed by the project. Are there such wetlands where there is possible Brassy Minnow presence (i.e. absence has not been proven in connected waterways)? If so, are there mitigation/offsetting measures to address Brassy Minnow habitat loss?	The wetlands in the Davidson Creek and Creek 661 watersheds were not specifically sampled for Brassy Minnow, but rather for any fish species. All wetlands connected to these creeks via surface water flows were sampled for fish presence/absence via multiple sampling methods in different seasons. Brassy Minnow were found only in Tatelkuz Lake. As there are no anticipated effects due to water withdrawal from the lake, no mitigation measures for littoral zone habitat loss have been developed (Section 10.9.1.2 Operation of the FWSS), but monitoring is required as part of Condition 3.16 of the CEAA Decision Statement and Condition 31 of Schedule B of the EA Certificate.	DFO believes the approach to fish survey and inventory for the project has been conducted with sufficient diligence to inform potential project related effects and risks. In addition, proposed mitigation and offsetting that are designed to provide benefit to other fish species also have potential to provide benefit to Brassy Minnow.
8	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.5.1.1	"Davidson Creek contributes an estimated 20% of the rainbow trout in Tatelkuz Lake… 80% coming equally from Turtle Creek and Creek 661" this may indicate considerable decreases in rainbow trout in Tatelkuz Lake, resulting in a loss of ability for the Nations to practice their rights to fish in this lake - this does not appear to have been addressed anywhere - in fact, mention of the Nations (impacts to and collaboration with) is really lacking in this document. Can this be mitigated through fish location? How will you ensure success? See comments on Fish Salvage.	The Project is expected to result in a pre-offsetting residual loss of fish habitat in the upper reaches of Davidson Creek and the Creek 661 watersheds. A proportional decrease in the productivity of the affected rainbow trout population is anticipated. However, while Davidson Creek as a whole may contribute 20% of the Rainbow Trout present in Tatelkuz Lake, the full extent of Davidson Creek will not be lost. A large proportion of the highly productive lower reaches will be maintained and will continue to support Rainbow Trout. The exact change in Rainbow Trout population following development of the mine is difficult to assess with any degree of confidence. Numerous factors drive population-level abundances beyond habitat availability, including food availability, competition, predation, and many others. The residual loss of fish habitat will be offset in a manner that adequately balances the losses. It is understood that the lost productivity associated with mine construction will be counterbalanced by productivity gains associated with offsetting. The offsetting plan described in Section 10 gives a detailed description of the proposed offsetting measures, subject to DFO acceptance and approval. A pre-disturbance fish salvage will be conducted throughout the mine site to capture and relocate fish. A fish salvage plan has been developed and will be appended to this application to provide the salvage methodology. The fish salvage plan describes best practices to maximize capture efficiency and maintain fish health. The fish salvage plan will be implemented for all fish-bearing areas beneath and upstream of the mine footprint (with the exception of	No significant effects on fish or fish habitat are anticipated for Tatelkuz Lake or the middle and lower reaches of Davidson Creek. The upper reaches of Davidson Creek will be permanently altered from the commencement of Project construction, with a permanent loss of fish habitat. Some historical evidence demonstrates Nations use of the upper reaches of Davidson Creek areas for fish harvesting. These losses will be offset with 'in-kind' and 'out-of-kind' habitat restoration, enhancement, creation, fish salvage and translocation (Section 15 Aboriginal Rights of the Application/EIS). Fish habitat offsetting-related meetings and site visits with Nations to discuss the Nations rights to fish are discussed in Section 4.1 Consultation Record. The offsetting plan described in Section 10 gives a detailed description of the proposed offsetting measures, subject to DFO acceptance and approval. A pre-disturbance fish salvage will be conducted throughout the mine site to capture and relocate fish. A fish salvage plan has been developed and will be appended to this application to provide the salvage methodology. The fish salvage plan describes best practices to maximize capture efficiency and maintain fish health. The fish salvage plan will be implemented for all fish-bearing areas beneath and upstream of the mine footprint (with the exception of Lake 16, which will be diverted and will continue to support fish). The fish salvage plan describes the methodology of salvage, including descriptions of capture methods, effort requirements, depletion assessment, fish release locations, and the requirement for oversight by qualified professional fish biologists.	The majority of offsetting and compensation measures proposed for the Blackwater project is located outside of the Nations' territories and thus does not fully address their reduced ability to fish in Tatelkuz Lake. The reviewer is aware of additional mitigation measures proposed at Dykam Ranch but those plans are not yet complete. This comment cannot be closed until these additional measures have been developed and reviewed.	BW Gold acknowledges the Nations' request for information on proposed Project-area offsetting plans, including Dykam Ranch on lower Chedakuz Creek and potential ponds in the Davidson Creek Watershed. Updates on Dykam Ranch Including lower Chedakuz Creek) were provided with the updated FHCP and Dykam restoration plans were provided through bi-weekly fisheries meetings. Potential ponds in the Davidson Creek watershed are being evaluated currently for addition to the FAAA - FOP. Additionally, riparian planting has been included as a further offset, bringing the riparian ratio up to 1.74:1.	The offsetting will include new habitat construction in the Davidson Creek and Creek 661 watersheds, located within the vicinity of the work and in the same watersheds. These offsetting measures, in combination with the freshwater supply system and additional mitigation, are expected to reduce the potential for significant adverse effects to fish populations in Tatelkuz Lake such that a substantial reduction in the long-term productivity of populations in the lake are not anticipated. The proposed effectiveness monitoring plan also includes fish usage monitoring and spawning success surveys in Davidson Creek, which will inform review of potential mine effects in the Davidson Creek watershed.
10	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.1	The RCP describes WQG exceedances through post-closure, has this been considered in these statements?	These exceedances have not specifically been incorporated into this section. Section 6.1 will be reviewed and revised as appropriate with information from reclamation and closure plan updates.	These exceedances have not been incorporated into this section because DFO cannot authorize the "deleterious deposit" that kills fish (as per Section 36 of the Fisheries Act) unless it complies with the Metal and Diamond Mine Effluent Regulation (MDMER). Therefore, all water released by the project must meet MDMER guidelines. This requirement has been included in Section 6.2 Summary of Fish and Fish Habitat Potential Effects.	Fish habitat and water quality, though separated in the regulatory world, interact with one another in nature. Therefore, WQG exceedances in post-closure are relevant because it provides the context within which fish habitat can be discussed.	BW Gold did not state that WQG exceedances in post-closure are not relevant, but rather that meeting MDMER guidelines is a requirement of permitting. Therefore, all water released by the project must meet MDMER guidelines during all phases of the Project, including the first 3 years of post-closure.	See proponent response.
11	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.1	In what bullet are the high- and low-grade ore stockpiles captured?	Low-grade ore stockpiles are mentioned in the third bullet in Section 6.2.1. The text will be amended to specifically include both low- and high-grade stockpiles.	-	This edit has not been made.	The requested change has been made in Section 6.2.1 of the revised document.	See proponent response.
13	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.2 (Freshwater Reservoir)	"the reservoir will be replaced by a wetland, during post-closure the wetland will be used as a passive water treatment facility for discharge from the TSF" concerns were raised through the review of the RCP regarding this optimistic plan - have updates/changes been made in the RCP that need to be reflected here?	Section 6.2.2 will be updated with revised information from reclamation and closure plan updates.	-	The current document still states that the reservoir will be replaced by a wetland. However, the internal comments state there will be a WTP. What is the current status of this development? The current document and the reclamation and closure plan need to be updated with the most recent information.	As per Section 4.2.3.1 Revegetation Species of the Joint Mines Act/Environmental Management Act Application, the reclamation strategy currently assumes the TSF, ECD, and FWR will support upland forested ecosystems, not wetland ecosystems. If successful wetland reclamation strategies are possible through the proposed reclamation research and are further supported as potential wetland restoration sites supported by favorable water quality monitoring results, then reclamation prescriptions for these areas will be revised, provided there is no interference with higher-priority water management goals. The proposed closure water management strategy is to treat contact water on site for the TSF and ECD, as opposed to the FWR for which water treatment is not an anticipated requirement. These changes have been made in Section 6.2.2.5 of the revised document.	See proponent response. Following further inquiry by DFO, it is understood that the AEA text remains incorrect, and the FWR will not be replaced by a wetland. The proposed strategy as described in this comment tracker is correct.

14	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.2-6.2.5	For all mentioned infrastructure (FWSS, MAR, airstrip, TL) the residual impacts are losses of riparian habitat - the offsetting ratio is less than 1:1 for these losses so the offsetting plan would appear incomplete given that all residual impacts (outside of instream habitat loss) are similar, and not fully recovered	The riparian losses associated with the project, including those listed in section 6.2.2 to 6.2.5 are quantified in Section 8 and carried forward to Section 10 as part of the offsetting balance. The resultant riparian offsetting ratio of 0.67:1 is subject to ongoing discussion with DFO and First Nations. The comment regarding the target ratio of 1:1 is noted. Exploration of offsetting options to meet this target is ongoing and the results will shared with First Nations and DFO as they become available.	The riparian losses associated with the project, including those listed in section 6.2 Summary of Fish and Fish Habitat Potential Effects are quantified in Section 8 Residual Death of Fish or Harmful Alteration, Disruption, or Destruction of Fish Habitat and carried forward to Section 10 Offsetting Plan as part of the offsetting balance. The resultant riparian offsetting ratio (revised to 0.71:1) is conservative due to double-counting of riparian losses from lost instream habitat which inherently includes adjacent riparian vegetation. This ratio is subject to ongoing discussion with DFO and First Nations. The comment regarding the target ratio of 1:1 is noted. Exploration of offsetting options to meet this target is ongoing and the results will be shared with First Nations and DFO for further dicussion as they become available.	Can you clarify whether actual riparian area or riparian services were double-counted? In any event, the reviewer agrees that continued discussion is necessary to discuss how to meet a minimum 1:1 ratio.	Riparian area losses were conservatively double-counted for lost instream habitat. BW Gold is committed to further discussion with the Nations and DFO on meeting the preferred 1:1 riparian offset ratio. BW Gold has also worked with Ecologic and Palmer to earmark additional offsetting at Ormond Creek to augment the current offsetting ratio in the FOP. The revised riparian ratio is 1.74:1. The current ratios for instream area and instream habitat units are approximately 1.74:1 and 2.03:1, respectively. These instream values are being further refined prior to submission of the application.	See proponent response.
15	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.3.2.2	The number of % given does not match the number of ecosystems listed (expect 2.5% is meant to represent waterbodies, or similar)	The sentence will be corrected to show the appropriate percentage breakdowns.	-	This is not fixed. There are 5 ecosystem types and 6 %s given. "Coniferous forest, broadleaf forest, mixed-wood forest, shrub land, and grassland make up 2.5%, 49.6%, 2.0%, 0.4%, 11.7%, and 0.3% of the watershed, respectively (Owens et al., 2019)."	The requested change has been made in Section 10.3.2.2 of the revised document.	See proponent response.
17	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.5.3	Preference would be to actually describe the plantings - Sections 10.1.4 and 10.4.4 are vague and not useful as a reference. What is the "total riparian plantings" that was calculated in GIS? Please provide this information.	Following discussions with First Nations and their consultants, BW Gold has committed to conduct a detailed surveys of plant communities at the proposed offsetting sites in 2022. Surveys will include ecosystem classification and plant species identification, as well as assessment of invasive and agronomic species presence. Detailed survey methods have been developed, shared with First Nations, and revised to incorporate feedback (Ecologic 2022). Once these surveys have been completed, BW Gold will develop revised planting plans for the offsetting sites. These plans will include detailed descriptions of site preparation, plant species to be used, planting densities, and follow-up requirements. These plans will be shared with First Nations when available and inputs will be incorporated into final plan versions. Total riparian area is based on GIS polygon analysis of proposed riparian planting areas. These polygons have been provided to First Nation reviewers following technical discussion meetings in January/February 2022.	As indicated in Section 10.4.1.1 Murray Creek and 10.4.1.2 Greer Creek, a combination of native seed mix and native shrub plantings will be used to restore riparian vegetation in bare areas. Following discussions with First Nations and their consultants, BW Gold has committed to conduct plant surveys in unimpacted portions of Murray and Greer creeks in 2022. The purpose of these surveys will be to characterize the natural riparian community adjacent to both streams, to identify the native herbs and shrubs present, and to provide a "template" for the type(s) of riparian communities that restoration efforts will attempt to emulate. Surveys will include ecosystem classification and plant species identification, as well as assessment of invasive and agronomic species presence. Detailed survey methods have been developed, shared with First Nations, and revised to incorporate feedback (Ecologic 2022). Once these surveys have been completed, BW Gold will revise the planting plans for the offsetting sites. These plans will include detailed descriptions of site preparation, plant species to be used, planting densities, and follow-up monitoring requirements. These plans will be shared with First Nations well in advance of initiation of riparian restoration in Murray and Greer creeks to allow for incorporation of any input First Nations may have. Total riparian area is based on GIS polygon analysis of proposed riparian planting areas. These polygons have been provided to First Nation reviewers following technical discussion meetings in January/February 2022.	This comment cannot be closed until we have seen Ecologic's baseline report and detailed planting plan.	Ecologic's baseline report and detailed planting plan for the FOP was provided to LDN and UFN December 14th.	See proponent response.
19	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.7	still struggling with the idea that one of the limiting features on the landscape for rainbow trout is early life-stage habitat - which will be the majority of habitat lost and not replaced - and statements throughout that downplay the importance of these habitats, e.g., "these habitats are limited in quality and productive capacity, compared to habitats in the lower watershed" is this not comparing apples to oranges - habitat that supports early life-stages vs. habitats that support forage and overwintering habitats? Davidson Creek is estimated to provide 25% of rearing habitat and 16% of spawning habitat (p. 33) - this seems high for an area that is claimed to be limited in its quality and productive capacity. The Nations request to understand why this proposed trade off between habitat types is considered equally or more beneficial to fish.	The quoted sentence, "these habitats are limited in quality and productive capacity, compared to habitats in the lower watershed", is simply a broad comparison of fish habitat suitability between the upper and lower portions of the Davidson Creek watershed. Generally, deeper, wider, slower, and lower-gradient creeks support higher Rainbow Trout productive capacity than narrower, shallower, faster, and higher-gradient creeks. This is largely driven by habitat area and complexity, prey availability, water chemistry, and other factors. General concepts aside, the HEP quantification of habitats directly accounts for the availability of suitable habitats for each life stage of Rainbow Trout in a transparent way. The value of the dimensionless habitat unit (HU) value is that it allows for direct "apples to apples" comparison, even when gained and lost habitats are not morphologically similar (e.g., ponds vs streams). As stated in the comment response for comment #13 in this tracking table: No specific models of quantification of fish productivity have been conducted as part of the baseline characterization. Rather, a detailed assessment of habitat suitability was conducted throughout the mine site. This approach is in alignment with DFO's requirement to address Harmful Alteration, Disruption, or Destruction (HADD) of fish habitat, which represents a shift from past policy that directly addressed fisheries productivity. Based on this detailed habitat assessment, a total of 17,381 Rainbow Trout overwintering HU were identified as lost under the mine site and 27,898 Rainbow Trout overwintering HU and 22,614 Chinook Salmon overwintering HU were identified as gained through habitat restoration/enhancement and creation. This represents a like-for-like replacement based on life-stage analysis.	The quoted sentence, "these habitats are limited in quality and productive capacity, compared to habitats in the lower watershed", is a general comparison of fish habitat suitability and availability between the upper and lower portions of the Davidson Creek watershed. Generally, deeper, wider, slower, and lower-gradient creeks support higher Rainbow Trout productive capacity than narrower, shallower, faster, and higher-gradient creeks. This comparison is largely driven by habitat area and complexity, prey availability, water chemistry, and other factors. More specifically, the HEP quantification of habitats directly accounts for the availability of suitable habitats for each life stage of Rainbow Trout in a transparent way. The value of the dimensionless habitat unit (HU) value is that it allows for direct "apples to apples" comparison, even when gained and lost habitats are not morphologically similar (e.g., ponds vs streams). As stated in the comment response for comment #13 in this tracking table: No specific models of quantification of fish productivity have been conducted as part of the baseline characterization. Rather, a detailed assessment of habitat suitability was conducted throughout the mine site. This approach is in alignment with DFO's requirement to address Harmful Alteration, Disruption, or Destruction (HADD) of fish habitat, which represents a shift from past policy that directly addressed fisheries productivity. Based on this detailed habitat assessment, a total of 17,381 Rainbow Trout overwintering HU were identified as lost under the mine site and 27,898 Rainbow Trout overwintering HU and 22,614 Chinook Salmon overwintering HU were identified as gained through habitat restoration/enhancement and creation. The figures of "25% of rearing habitat" and "16% of spawning habitat" are inaccurate and the sentence will be removed.	Where did the numbers "25% of rearing habitat" and "16% of spawning habitat" originally come from? Although you stated these are wrong, it is a big enough deviation from your more recent descriptions of RBT habitat that it warrants an explanation.	The original numbers for rearing and spawning habitat were rough estimates comparing the habitat in Davidson Creek to the habitat assessed in other streams in the LSA. This statement was removed because the values were misleading about how much RB rearing and spawning habitat is actually present in Davidson Creek.	See proponent response.
20	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Table 10.4	Table showing comparison between habitat types lost:gained would be helpful - this was presented in Schedule 2	Please clarify the request - what habitat type is the reviewer referring to? The equivalent table in the Compensation Plan (6-3) provides Mainstem vs Tributary labels for impacted streams, but these are not indicative of the habitat type. They are simply groupings of stream segments based on stream naming to aid in comprehension: 'mainstem' indicates that the segments are part of a named/numbered stream, while tributaries indicates that the segments flow into these named/numbered streams. Table 8-4 provides a segment-specific Stream Class and Fish-Bearing-Status, which may address the reviewers request.	-	I believe the previous reviewer wanted to see something equivalent to Table 5-3 (p. 52) and Table 6-2 (p. 78) in the Schedule 2 Compensation Plan. In these tables, "Habitat Units" column is broken into: -Spawning/Egg incubation -Fry Summer Rearing -Juvenile summer rearing -Adult summer foraging -Overwintering Having these breakdowns will help assess any vulnerabilities to certain lifestages.	A similar table to the Schedule 2 Compensation Plan with broken down Habitat Units has been added to Section 10.7 Habitat Balance.	See proponent response. Note, although not presented together, HU losses are presented according to habitat function in Table 8-5, and the HU gains presented according to habitat function are provided in Table 10-3.
21	12-01-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.9.3.1	Add species composition to the 4th bullet	Species composition will be monitored as part of the survivorship metric. The bullet will be amended to explicitly state this.	-	This edit has not been done.	The requested change has been made in Section 10.9.3.1 of the revised document.	See proponent response.
24	12-01-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.4.2	Why are Creek 146920 and Creek 543585 only suitable for summer rearing? Further down in this section you state that Creek 543585 has good habitat for migration and rearing, so which is accurate?	The text will be amended to include "migration" for Creek 146920 and Creek 543585.	-	The sentence "Habitat in Creek 146920 and Creek 543585 is only suitable for summer rearing due to low water levels in summer and winter freeze up to the substrate" is still in this section, please update the text to include migration since it is stated further below.	The requested change has been made in Section 5.4.2 of the revised document.	See proponent response.

32	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.5.1.3	You state that it is likely that mountain whitefish spawn in the main channel of Chedakuz Creek, did you survey this area for them or are you simply assuming they are there?	Direct sampling was not conducted in Chedakuz Creek, although a hoopnet program was conducted in Davidson Creek in 2012. As described in Section 5.3.8.2.6 Mountain Whitefish of the Project's Environmental Impact Statement: "The large number of mountain whitefish residing in Tatelkuz Lake indicates that they require large amounts of spawning habitat. The low numbers of spawners captured in streams in fall 2012 indicates that either most spawners do not use small tributary streams to Chedakuz Creek. Therefore, it is likely that most mountain whitefish residing in Tatelkuz Lake spawn in Chedakuz Creek because it is the main inlet and outlet of the lake and is the largest stream in the immediate vicinity of the lake. Middle Chedakuz Creek is the most likely spawning location because newly-emerged fry would be washed downstream into Tatelkuz Lake. The use of Chedakuz Creek by mountain whitefish for spawning and embryo incubation has not yet been confirmed due to the difficulty in installing hoop nets in such a large stream, particularly at higher fall discharges."	Direct sampling was not conducted in Chedakuz Creek. As described in Section 5.3.8.2.6 Mountain Whitefish of the Project's Environmental Impact Statement: "The large number of mountain whitefish residing in Tatelkuz Lake indicates that they require large amounts of spawning habitat. The low numbers of spawners captured in streams in fall 2012 indicates that either most spawners do not use small tributary streams to Chedakuz Creek. Therefore, it is likely that most mountain whitefish residing in Tatelkuz Lake spawn in Chedakuz Creek because it is the main inlet and outlet of the lake and is the largest stream in the immediate vicinity of the lake. Middle Chedakuz Creek is the most likely spawning location because newly-emerged fry would be washed downstream into Tatelkuz Lake. The use of Chedakuz Creek by mountain whitefish for spawning and embryo incubation has not yet been confirmed due to the difficulty in installing hoop nets in such a large stream, particularly at higher fall discharges."	Thank you for the response. It has been 10 years since the hoopnet program was conducted, and a lot can change in 10 years. Is there a plan to conduct more sampling to confirm that mountain whitefish spawn in the main channel of Chedakuz Creek?	The focus of the fall spawning program has been on Kokanee in lower Chedakuz Creek, not in middle Chedakuz Creek where Mountain Whitefish spawning is most likely (outside of Tatelkuz Lake gravel shoreline areas). No Mountain Whitefish were observed spawning in lower Chedakuz Creek during the 2021 and 2022 fall spawning surveys that were focused on Kokanee. During 2022 late summer three-pass electrofishing in lower Chedakuz Creek one juvenile Mountain Whitefish was captured, but this general survey was not expected to capture adult Mountain Whitefish that typically spawn in late fall. There currently is no plan to include specific fall spawning monitoring of Mountain Whitefish in lower or middle Chedakuz Creek or in Tatelkuz Lake, because this species has not been the focus of concerns regarding the Project.	DFO believes the approach to fish survey and inventory for the project has been conducted with sufficient diligence to inform potential project related effects and risks.
34	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.2	Will the wetland proposed to be made be able to support fish, especially when considering it is planned to be used as a passive water treatment facility for discharge from the TSF and there is post closure water quality exceedances anticipated?	No, there are currently no plans to provide future fish habitat on the mine footprint or in upstream areas. The reclamation and closure plan updates will be reviewed and this text will be adjusted as necessary.	No. There are currently no plans to allow fish access to the wetland or any other habitat located upstream of the Environmental Control Dam (ECD) after closure. The wetland will include a border land barrier with no water channels connecting to downstream habitat.	Is the wetland still planned or will a water treatment plant be built instead?	As per Section 4.2.3.1 Revegetation Species of the Joint Mines Act/Environmental Management Act Application, the reclamation strategy currently assumes the TSF, ECD, and FWR will support upland forested ecosystems, not wetland ecosystems. If successful wetland reclamation strategies are possible through the proposed reclamation research and are further supported as potential wetland restoration sites supported by favorable water quality monitoring results, then reclamation prescriptions for these areas will be revised, provided there is no interference with higher-priority water management goals. The proposed closure water management strategy is to treat contact water on site for the TSF and ECD, as opposed to the FWR for which water treatment is not an anticipated requirement. These changes have been made in Section 6.2.2.5 of the revised document.	See proponent response.
37	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	8.1.1	If the Land Development Guidelines for the Protection of Aquatic Habitat identify a 15 m buffer as appropriate for fish-bearing waterbodies, why have you decided on a 5 m buffer on each side of waterbodies. This seems like a significant difference, even if fish are not confirmed to be present.	As discussed in Section 8.1.1.3, there are a variety of guidance documents that provide varying buffers widths based on numerous factors, including fish presence/absence. The presented buffer widths represent a synthesis of these guidelines.	As discussed in Section 8.4.1.3, there are a variety of guidance documents that provide varying buffer widths based on numerous factors, including fish presence or absence. Therefore, buffer widths of varying dimensions were applied to various stream segments and lake shorelines based on their known or assumed fish-bearing status as described in Section 8.4.1.3.	Can you show specifically how you used BC Forest Practices Code (and by extension the Riparian Management Area Guidebook) to inform riparian buffer widths? You refer to DFO and RAR documents, which aligns with the 15m/5m put forth, but it is unclear how the Forest Practices Code was used. If you are only using the DFO/RAR guidelines, then it is misleading to include information about the BC Forest Practices Code in the text. If the Forest Practices Code was indeed used, I would also like to point out the RRZ/RMZ/RMA widths refer to only one side of the creek, not both, and that there are minimum rentention % required within the RMZs. Please describe how you incorporated both of	The BC Riparian Management Area Guidebook was used as the primary source for riparian buffers, not the BC Forest Practices Code. The former contains the table detailing Reserve Zone (harvesting not permitted) and Management Zone (constraints to harvesting apply) widths for different stream classes. The Reserve Zone of zero for non-fish bearing streams (S5 and S6) is referred to in Section 8.4.1.3. Reference to the BC Forest Practices Code will be removed from the text in Section 8.4.1.3 and changed to the BC Riparian Management Area Guidebook.	See proponent response.
41	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.4.1.2	"The plant selection was based on..." No mention of consultation with First Nations or incorporating their TEK in plant selection.	Feedback on plant species is welcome and will be incorporated into the detailed planting plan that is under development. The proposed plant species were provided to First Nations and feedback has been provided, leading to the commitment to develop a detailed planting plan to incorporate updated site information and First Nation comments.	The proposed plant species were provided to First Nations and feedback has been provided, leading to the commitment to develop a detailed planting plan to incorporate updated site information and First Nation comments. This planting plan will be further developed with First Nation after a summer 2022 vegetation field survey is completed.	Leaving comment open until we review the planting plan and are able to engage further on the topic.	Please refer to the response to comment #17.	See proponent response.
42	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.4.1.2	"Densely vegetated area, and areas with standing water, are proposed to be retained and protected." Could you be more specific in exactly how this will be done?	During construction, areas of existing vegetation that should be retained (e.g., native species) will not be disturbed and will be flagged. Barbed-wire fencing will be installed around the perimeter of the habitat offsetting areas, which will protect existing vegetation and areas of standing water from cattle and machinery in the future.	During construction, areas of existing vegetation that should be retained (e.g., native species) will not be disturbed and will be flagged. Fencing will be installed around the perimeter of the habitat offsetting areas, to protect existing vegetation and areas of standing water from cattle.	Thank you for the response, it would be beneficial to describe this in the plan itself.	This information has been added to Section 10.4.1.2.	See proponent response.
43	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.4.1.2	At what point does riparian area change from bare cover, to shrub cover, to densely vegetated areas? Clarification on this would be helpful, as your planting descriptions are vague.	A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	A site-specific planting plan will be developed after receiving Authorization and in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. After development the plan can be provided to FN for review and comment, prior to construction.	The reviewer disagrees that you will receive authorization from DFO/ECCC (assuming that is what you are refering to) prior to the planting plan being provided for review. The planting plan is an essential aspect of the FAA and needs to be provided well in advance of receiving authorization. When will the planting plan be available, a rough timeline would be appreciated.	Please refer to the response to comment #17.	See proponent response.
48	12-02-2021	LDN/UFN	Mikayla Davis	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.9.3.1	Is 10 years enough time to adequately assess riparian vegetation success and physical stability and hydraulic function?	Yes. The DFO document "Assessing the Effectiveness of Fish Habitat Compensation Activities in Canada: Monitoring Design and Metrics (2012)", suggests that it may take 5 to 20 years for riparian vegetation to fully develop; therefore, the proposed ten-year monitoring program was considered sufficient to monitor any riparian vegetation changes over time. DFO has previously given direct feedback that a 10-year monitoring period is required.	Yes. The DFO document "Assessing the Effectiveness of Fish Habitat Compensation Activities in Canada: Monitoring Design and Metrics (2012)", suggests that it may take 5 to 20 years for riparian vegetation to fully develop; therefore, the proposed ten-year monitoring program was considered sufficient to monitor any riparian vegetation changes over time. DFO has previously given direct feedback that a 10-year monitoring period is required. Adaptive management (Section 10.9.4) will be developed to identify the need for remedial measures, further mitigation, or offsetting measures if set environmental thresholds have not been met during each monitoring period, including after 10 years.	10 years is sufficient, given you meet your offsetting goals. This is based on the assumption that no disturbance will occur in the future (SROW in place), however we would like to continue the discussion on the SROWs. We feel that they do not provide concrete protection in the long term, especially in such remote locations.	BW Gold held meetings to discuss the use of SROWs and restructive covenants as a mechanism to secure offsetting areas in November and December, including with legal counsel on both sides supporting the discussion. BW Gold has made a proposal to the Nations in regards to monitoing the offset areas by way of its Aboriginal Group Monitoring Plan EAC condition. This would provide a mechanism for the Nations to monitor and report on the offsets. While we understand the Nations have a concern about the effectiveness of the proposed form of securement, BW Gold is of the view that the SROWs and restrictive covenants are a viable way to protect the restored areas.	See proponent response.
50	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	Are invasive plant species present?	A site-specific characterization of the existing plant communities at the offsetting sites will be conducted in 2022. The main objectives of this survey will include assessment of existing vegetation diversity and abundance, evaluation of existing conditions that may influence the success of planting, and documentation of invasive, agronomic, or at-risk plant species.	A site-specific characterization of the existing plant communities at the offsetting sites will be conducted in 2022. The main objectives of this survey will include assessment of existing vegetation diversity and abundance, evaluation of existing conditions that may influence the success of planting, and documentation of invasive, agronomic, or at-risk plant species.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan. There needs to be commitments to conduct invasive species management should there be a need identified by 2022 studies.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
51	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	Seeding is mentioned under "Timing" on Figure 007 but no details are provided in terms of species composition, seeding rate, techniques, etc.	Seeding specifications are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Seeding specifications have been reviewed and revised based on input from regulators and First Nations. A site-specific planting plan will be developed in consultation with First Nations, in advance of offset construction, that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
52	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	Coyote willow is not common in northern BC - can you confirm this species is locally present and abundant?	Plant species proposed are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Seeding specifications have been reviewed and revised based on input from regulators and First Nations. A site-specific planting plan will be developed in consultation with First Nations, in advance of offset construction, that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
53	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	Geyers willow is not common in BC - can you confirm this species is locally present and abundant?	Plant species proposed are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Seeding specifications have been reviewed and revised based on input from regulators and First Nations. A site-specific planting plan will be developed in consultation with First Nations, in advance of offset construction, that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
54	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	My math indicates that the 264 shrub clusters, spaced 11-12m apart, is only sufficient to cover one side of the stream (full stream length (total of all segments) = ~2,926 - is this correct? Is this spacing (density) reasonable for areas of higher disturbance (e.g., the crossing)?	The proposed planting plan and species will be updated following Ecologic's summer survey program. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. Regarding the crossing, it is anticipated that a gravelly "trail" will extend from the gate (at proposed fenceline) to the crossing structure. No vegetation will be planted in these areas. The area between the proposed bridge block abutments and top of bank will be planted with appropriate riparian species based on Ecologic's field program.	The proposed planting plan and species will be updated following Ecologic's 2022 summer survey program. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. This plan will be provided to the advisory group for review and input before finalization. Regarding the crossing, it is anticipated that a gravelly "trail" will extend from the gate (at proposed fenceline) to the crossing structure. No vegetation will be planted in these areas. The area between the proposed bridge block abutments and top of bank will be planted with appropriate riparian species based on Ecologic's field program.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.

55	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	What is the rationale for the placement of tree plantings outside the shrub planting buffer?	Proposed tree planting areas were based on local relief, as observed along reference reaches upstream and downstream of the proposed work areas. Although the planting polygons have distinct breaks and separation, it was anticipated that tree and shrub plantings areas would overlap (e.g. shrubs and trees planted in the same areas). Following Ecologic's riparian surveys and species recommendations planting polygons will be refined to show overlapping features.	Proposed tree planting areas were based on local relief, as observed along reference reaches upstream and downstream of the proposed work areas. Although the planting polygons have distinct breaks and separation, it was anticipated that tree and shrub plantings areas would overlap (e.g. shrubs and trees planted in the same areas). Following Ecologic's 2022 summer riparian surveys and species recommendations planting polygons will be refined to show overlapping features.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
56	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	Does the shrub planting polygon (purple) also include the installation of live stakes and brush layers? Can you provide greater detail so that this is visible in the appropriate locations?	The shrub planting polygon (purple) does not include the installation of live stakes and brush layers. Proposed works below the high water mark have seperate planting details provided on Drawing Sheet 06 (Appendix E1 - 1824-3-9-Lower Murray Creek). Clarity can be provided within each drawing package following Ecologic planting guidance.	The shrub planting polygon (purple) does not include the installation of live stakes and brush layers. Proposed works above the normal water level have seperate planting details provided on Drawing Sheet 06 (Appendix E1 - 1824-3-9- Lower Murray Creek). The requested clarity will be provided within each drawing package following Ecologic planting guidance.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
57	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E1	Where is "native earth fill" being sourced from?	The source of this material is not yet confirmed. Some organic topsoil will be stripped and salvaged within the limits of any excavation areas for later use in association with restoration and seeding of disturbed areas and construction of additional habitat. Any reused or new organic topsoils will be identified for use by a qualified soils QP and invasive vegetation growth will be monitored and controlled.	The source of this material is not yet confirmed. Some organic topsoil will be stripped and salvaged within the limits of any excavation areas for later use in association with restoration and seeding of disturbed areas and construction of additional habitat. Any reused or new organic topsoils will be identified for use by a qualified soils QP and invasive vegetation growth will be monitored and controlled. The final source(s) of "native earth fill" will be identified and included in the plan prior to submission to the Advisory Committee for review and comment.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan. If not enough topsoil is sourced from site, will the plan be to bring in additional soil?	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
58	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E2	E2 planting prescriptions include the same species list as E1 - is this most appropriate to each site? In Appendix F it states "The plant selection was based on field reconnaissance..." so how has this information been used to inform site-specific planting prescriptions?	The proposed planting plan and species specified in the E1 and E2 prescriptions will be updated following Ecologic's summer survey program. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. The planting plan will be developed in consultation with First Nations and their reviewers, with the a key aim being the incorporation of First Nations input and Traditional Ecological Knowledge into planting plans.	The proposed planting plan and species specified in the E1 and E2 prescriptions will be updated following Ecologic's 2022 summer survey program. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. The planting plan will be developed in consultation with First Nations and their reviewers, with the a key aim being the incorporation of First Nations input and Traditional Ecological Knowledge into planting plans.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
59	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E2	What are planting densities so sparse? Trees and shrubs planted at 1 per 36m2. What does "Woody species to be interspersed" mean?	Plant densities proposed are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Plant densities proposed are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. Interspersing woody species means to mix locations of trees and shrubs.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan. Planting density is a major concern with the current plan and can have a large effect on restoration success. Lastly, please ensure that the meaning of interpersing woody species is clarified in new plan	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
60	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E2	Why no seeding proposed here? The last bullet in "Site Preparation" makes mention of seeding.	Seeding specifications are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Seeding specifications are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
61	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E2	No revegetation is presented in the areas around crossings - why is this different from what is being conducted in Appendix E1?	The proposed planting plan and species will be updated following Ecologic's summer survey program. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. Regarding the crossing, it is anticipated that a gravelly "trail" will extend from the gate (at proposed fenceline) to the crossing structure. No vegetation will be planted in these areas. The area between the proposed bridge block abutments and top of bank will be planted with appropriate riparian species based on Ecologic's field program.	The proposed planting plan and species will be updated following Ecologic's summer 2022 survey program. A site-specific planting plan will be developed in advance of offset construction, with input from First Nations, that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. Regarding the crossing, it is anticipated that a gravelly "trail" will extend from the gate (at proposed fenceline) to the crossing structure. No vegetation will be planted in these areas. The area between the proposed bridge block abutments and top of bank will be planted with appropriate riparian species based on Ecologic's 2022 field program.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
62	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E3	Seeding rates are too low - see comment on Schedule 2 Amendment (same comment for E4, E5)	Seeding specifications are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Seeding specifications are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
63	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E4	Quantity of plants seems low - for shrubs in particular - with a planting density 6x higher than trees (planted in clusters of 6 shrubs per cluster), there's only an additional ~700 shrubs anticipated to be needed. Can you show us the calculation for this?	Plant densities proposed are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Plant densities proposed are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
64	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E4	Confirm seeding only in shrub planting polygons.	Seeding specifications are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Seeding specifications are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
65	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E5	Where does all the soil go that is removed to create the pond? How much is excavated vs how much is needed for the 10cm topsoil cover?	Alluvial sediment excavated from proposed ponds are to be used on site and/or incorporated into the design (e.g., gravels and cobbles, if present will be used along shoal habitat). 10 cm topsoil or loose growth medium will be sourced from within the footprint of the disturbance area. Any remaining material will be graded on site and restored with seed and/or plantings. Planting quantities and species to be updated based on the findings of EcoLogic's scope of work (Ecologic, 2022).	Alluvial sediment excavated from proposed ponds are to be stored outside of the 15 m riparian buffer next to the pond and/or incorporated into the design (e.g., gravels and cobbles, if present will be used along shoal habitat). 10 cm topsoil or loose growth medium will be sourced from within the footprint of the disturbance area. Any remaining material will be graded on site and restored with seed and/or plantings. Planting quantities and species to be updated based on the findings of EcoLogic's scope of work (Ecologic, 2022).	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan. Specifically, we are looking for guiding principles used to select sites for the placement of excavated materials. What areas will be avoided and what areas are preferred?	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
66	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E5	What is the total area of the "area of disturbance" around the pond? Concern that quantities of plant material are low.	The total area of disturbance around the pond is approximately 4,833 square metres. The total area of disturbance is 11,839 square metres. Planting quantities will be refined following the completion of EcoLogic's scope of work	The total area of disturbance around the pond is approximately 4,833 square metres. The total area of disturbance is 11,839 square metres. Planting quantities will be refined following the completion of EcoLogic's summer 2022 vegetation survey, with input from First Nations.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
67	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E5	Thickspike wildrye is inappropriate - it prefer dry, alkaline flats, sand dunes and gravelly sites and open forests	Plant species proposed are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Plant species proposed are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
68	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E6	Are there upland and low-lying features to the connector arm? Seed mix 1 is for very dry habitats - please confirm. Sand dropseed is rare in BC, and occurs in grasslands and shrublands - can you confirm that it is present locally? From the aerial imagery, I wouldn't think so, as neither of these habitat types are clearly visible. Alternatively, fringed brome prefers wetter sites. Where is this seed mix being used exactly?	Plant species proposed are currently being reviewed and revised. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Plant species proposed are currently being reviewed and revised with input from First Nations. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.

69	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix E6	Please provide coloured or hashed polygons for proposed planting areas that correspond to planting prescriptions.	These polygon areas will be included in the site-specific planting plan that will be developed in advance of offset construction. It will include a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	These polygon areas will be included in the site-specific planting plan that will be developed in advance of offset construction with input from First Nations. It will include a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
70	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 1.1.2	"The generally bare riparian areas are proposed to be enhanced with a combination of native seed mix and native shrub plantings whereas areas with sparse shrub cover are only proposed to be seeded" this is not clear from Appendix E or the main document	This text will be clarified to align with the design drawings and with the detailed planting plan that will be developed prior to offset construction.	This text will be clarified to align with the design drawings and with the detailed planting plan that will be developed prior to offset construction with input from First Nations.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
71	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 1.1.3	"The proposed plantings include a native seed mix and shrub plantings around the periphery of the pond and aquatic (emergent) plantings in the gentle, shallow shoreline area" this is not clear from Appendix E or the main document	This text will be clarified to align with the design drawings and with the detailed planting plan that will be developed prior to offset construction.	This text will be clarified to align with the design drawings and with the detailed planting plan that will be developed prior to offset construction with input from First Nations.	This comment cannot be closed until we have seen Ecologic's 2022 baseline report and updated planting plan.	Please refer to the response to comment #17.	See proponent response. It is understood that the planting plan has been provided.
77	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 3	Add: cleaning of equipment before leaving site as well, or specify additional cleaning before moving from one site to the next	Comment acknowledged; this mitigation will be added to the CEMP.	-	Edit not made (Appendix O Section 3 of June 2022 FAAA), this section only mentions cleaning of equipment prior to entering site, not leaving as well.	The requested revision has been made in Section 1.2 of Appendix O CEMP.	See proponent response.
78	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 3	Add: identification, decision making (e.g., removal method) and supervision of invasive plant removal by a QP	Comment acknowledged; this mitigation will be added to the CEMP.	-	Edit not made (Appendix O Section 3 of June 2022 FAAA).	The requested revision has been made in Section 3 of Appendix O CEMP.	See proponent response.
79	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 3	Add: nest sweep (especially if clearing within the timing window) and other wildlife surveys prior to tree removal - why are you proposing to remove trees?	Trees may need to be removed to allow for equipment access in upland areas. Riparian tree clearing will be absolutely minimized, unless there is a safety risk to workers. Nest sweeps are specified in Section 10.1 of the CEMP.	Trees may need to be removed to allow for equipment access in upland areas. Riparian tree clearing will be minimized, unless there is a safety risk to workers. Nest sweeps are specified in Section 10.1 of the CEMP.	Add: a QP to record species and #s of plants removed. Add: minimum # of plants replaced per 1 removed.	The requested revisions have been made in Section 3 of Appendix O CEMP.	See proponent response.
81	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 5	Under the Fisheries Act - are you required to report to anyone else?	We are unaware of a requirement to report elsewhere, although any spill reporting would be included in environmental monitoring reports shared with First Nations and regulators.	Any spills also need to be reported to the BC Ministry of Environment and Climate Change Strategy, which has been added. Any spill reporting would be included in environmental monitoring reports shared with First Nations and regulators.	Significant spills should be reported to First Nations in a timely manner and not wait until regularly scheduled reporting. Please add into section.	The requirement to report to the Nations has been added to Section 5 of Appendix O CEMP.	While an incident related to a spill would fall under the purview of ECCC, a *Fisheries Act* Authorization does typically include conditions that requires a proponent to repond to an incident by ceasing works and immediately notifying DFO's Observe, Record and Report Line 1-800-465-4336 or DFO.ORR-ONS.MPO@dfo-mpo.gc.ca. The Authorization would also require that any relevant reporting submitted to DFO is also provided to Indigenous Nations.
83	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 15	Add: reporting on any wildlife found, relocated, euthanized, monitored for, encounters, etc.	Comment acknowledged; this reporting requirement will be added to the CEMP.	-	Edits not made (now Appendix O).	The requested revisions have been made in Section 15 of Appendix O CEMP.	See proponent response.
84	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix F 15	Add: deviations from prescriptions, photos of all completed works	Comment acknowledged; this reporting requirement will be added to the CEMP.	-	Edits not made (now Appendix O). Please also add: -description of ESAs identified and avoided -summary of area of vegetation removed, species, and re-vegetation efforts	The requested revisions have been made in Section 15 of Appendix O CEMP.	See proponent response.
85	12-02-2021	LDN/UFN	Jessica Lowey	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix G 2.1.1.1	Last bullet: riparian vegetation should also be assessed for species composition to understand if weeds are present, if agronomic species are outcompeting native species planted/seeded - update Table 1-1 and text below as well	Planted vegetation species diversity is included as part of the survivorship assessment. Text will be amended to explicitly state this.	Planted vegetation species diversity is included as part of the survivorship assessment. Text has been amended throughout Appendix G to explicitly state this.	(Note this is now Appendix P) This bullet point has been edited but is confusing. Further edits are needed: 1. The opening sentence does not mention species composition, and it should. 2. The following 2 sentences state very similar but slightly different things: "Follow-up inspections will be conducted once-yearly during years 1, 3, 5, and 10 following planting to record the survivorship and general vegetation cover, including competition from agronomic species. Riparian assessments will include an evaluation of species composition (i.e., planting schedule and identification of weeds), survivorship, density (i.e., cover).". 2a. Are follow-up inspections and riparian assessments the same thing? If so, please condense into 1 sentence to improve clarity. 2b. I'm not sure what "planting schedule" means and how that will give you species composition. Species composition is the contribution of each species to the vegetation, expressed as % totalling 100%. Please make this more clear in this bullet point. With respect to Table 2-2 (was 1-1 in old document): 1. species composition should be its own line item under "indicators of success", not grouped together with survivorship. We are not only concerned with mortality due to weeds, but also if the restored species composition is similar to baseline/reference conditions. 2. the "field methods" for riparian vegetation does not make sense as it mentions "Fish habitat assessment of monitoring stations and reference stations". Shouldn't "fish habitat assessment" be replaced with "vegetation plot surveys"?	The requested revisions have been made in Section 2.2.2 and Table 2-2 of Appendix P Fisheries Offsetting Habitat Effectiveness Monitoring Plan.	Refer to proponent's response regarding changes. Also, DFO is considering including a success criteria condition in the authorization such as: 1. A representative native riparian community will be established within new or restored riparian areas. Planted vegetation will achieve 70% survival at year 3, and will provide a minimum of 90% cover of the new or restored riparian area by year 10. In addition, DFO is considering requiring offset effectiveness monitoring in years 1, 2, 3, 5, 7, and 10 following construction of the offset.

87	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.9. Appendix G_Offset Effectiveness Monitoring Program_2021_07_21 Formatted	HEP provides and appropriate, robust and reproducible method for assessing impacts of the works and predicting value of offsetting/compensation activities. Good work. This same HEP data also provides a logical methodology for measuring the effectiveness of the works by conducting "after" HEP surveys to evaluate whether the works completed result in the predicted conditions. 1. Include HEP surveys tables (and data files) showing existing/predicted conditions for each treatment area as part of the monitoring plan. 2. Include timeline and work plan for HEP surveys to evaluate whether the works completed result in the predicted conditions. 3. Include details of a data sharing agreement with Research Partners and First Nations groups to tie this work to the "Proposed Research Programs" included as complementary measures.	HEP is a valuable tool for evaluating and predicting habitat quality and informing detailed design to adequately offset for losses. However, it has limited applicability as a long-term monitoring tool, given the inherent natural variability of the restored system and the variability of the habitat measurements. Progress of the restoration works can be more accurately monitored using the methods proposed in the effectiveness monitoring plan. The basis for compliance monitoring and adaptive management will remain in the existing effectiveness monitoring plan. However, re-evaluation of the HEP results in the future will be completed as an additional task, to assess the accuracy of the HEP predictions following restoration/enhancement.This commitment to complete HEP re-evaluation to the post-restoration conditions will be added to the Authorization Application.	HEP is a valuable tool for evaluating and predicting habitat quality and informing detailed design to adequately offset for losses. While HEP can be used as a long-term monitoring tool, the inherent natural variability of the restored system and the variability of the habitat measurements make HEP an inaccurate tool for comparisons. Progress of the restoration works can be more accurately monitored using the methods proposed in the effectiveness monitoring plan. The basis for compliance monitoring and adaptive management will remain in the existing effectiveness monitoring plan. However, re-evaluation of the HEP results in the future will be completed as an additional task, to assess the accuracy of the HEP predictions following restoration/enhancement.This commitment to complete HEP re-evaluation to the post-restoration conditions will be added to the Authorization Application.	If "the inherent natural variability of the restored system and the variability of the habitat measurements make HEP an inaccurate tool for comparisons" then it is not appropriate for calculating offsets either. The risks that vaugue reporting, unreleased data, a lack of follow up biological data collection, vaugue strategies for riparian restoration and generally overly optimistic projections will lead to net losses of habitat productivity are too high currently. A 2:1 area to area ratio (vs HEP) will provide far less subjectivity and more opportunities / probability that the very real impacts of the mining operation will actually be offset elsewhere (regardless of how well it is monitored and/or how transparently that data is shared).	The HEP method has been widely used across North America as a reliable model for quantifying habitat loss, because that is what it is designed to accomplish. It provides a means of quantifying biologically relevant habitat losses or gains with consideration of habitat preferences and requirements of a species' different life stages. However, this method for evaluating and predicting habitat quality and informing detailed design to adequately offset for losses is not designed to compare changes in habitat year-over-year due to its ranking system. The fact this method is not useful for something it is not designed for, does not make it inappropriate for the task it is designed to accomplish. The proposed ratio of instream habitat compensation to impact is 2.03:1 in Habitat Units (HU). A detailed description of the HEP methodology can be found in the ECCC FHCP Information Request #9 Memorandum dated September 9, 2022. BW Gold is proposing to include additional offsetting measures to achieve an offsetting ratio that is acceptable to both First Nations and the DFO. During summer 2022, detailed investigation of stream restoration and pond creation opportunities was conducted. These sites are located in the immediate vicinity of the project in the Davidson Creek, Chedakuz Creek, and Mathews Creek watersheds in areas that will directly benefit project-affected fish populations. Reports of the results of the reconnaissance program have been shared with First Nations (memorandum titled "Doug Short (Dykam) Ranch Fish and Riparian Habitat Offsetting Opportunities Reconnaissance-Level Site Survey", Palmer 2022). The design process for these additional offsetting measures is ongoing and the results will be shared with First Nations and DFO when available.	See proponent's response regarding application of HEP. DFO understands that the HEP approach assists in describing the value of losses and gains using habitat units and incorporating various factors associated with fish habitat value, however DFO will also consider the total areas of losses and gains during the review process. The proponent has subsequently proposed additional instream and riparian offsetting, including construction of new fish habitat in the vicinity of the proposed works.
88	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Table 4. Habitat suitability ratings for different life stages of Rainbow Trout (AMEC 2014); Glide "4" and Other "3" habitat classes with defined habitat suitability ratings added by Palmer/TGAEC 2017. Appendix B. Habitat Evaluation Procedure (HEP) for Blackwater Project – Fisheries Offsetting Plan	"unique aquatic habitats found in several ranchland streams selected for offsetting measures necessitated defining two additional habitat classes to better describe existing conditions: Glide 4 and Other 3". Both Glide 4 and Other 3 are assigned 0 values for all life stages of both rainbow trout and chinook salmon. This would imply that these areas provide no fisheries values what so ever and therefore should have no fish present. This is false and results in significant overacounting of habitat gains when remedial works are completed (ex. planting riparian veg or seeding well away from the banks of the stream). Please revise.	Glide 4 is characterized as "Areas of slow flowing, moderately shallow water with fine substrates, low habitat complexity." These are represented by low gradient, wide, shallow, cattle-impacted habitat units. We assigned 0.25 fry habitat value to Glide 4 units (not zero), and zero to other life stages. We acknowledge that there is some value in all wetted areas; however, the increments in suitability are in 0.25 steps and zero habitat means less than 0.125 suitability. While we maintain the zero habitat value for the adult life-stage for Glide 4, we will increase the value of the Glide 4 suitability from zero to 0.25. Other 3 habitat is characterized as "Shallow, low gradient (near zero) habitat, wetland-like with undefined channel, or multiple-thread channels, fine sediment dominated substrates, low cover, LWD lacking or absent, overhead canopy lacking." The definition of this habitat states specifically that it is "near zero" habitat. These habitat units are generally heavily impacted by cattle trampling. While there will be some small amount of habitat suitability is isolated pockets, as the commenter states, the suitability for all life-stages is closer to zero than 0.25.	Glide 4 is characterized as "Areas of slow flowing, moderately shallow water with fine substrates, low habitat complexity." These are represented by low gradient, wide, shallow, cattle-impacted habitat units. We assigned 0.25 fry habitat value to Glide 4 units (not zero), and zero to other life stages due to the type of habitat available and the preferences for each life stage of Rainbow Trout. We acknowledge that there is some value in all wetted areas; however, the increments in suitability are in 0.25 steps and zero habitat means less than 0.125 suitability. Other 3 habitat is characterized as "Shallow, low gradient (near zero) habitat, wetland-like with undefined channel, or multiple-thread channels, fine sediment dominated substrates, low cover, LWD lacking or absent, overhead canopy lacking." The definition of this habitat states specifically that it is "near zero" habitat. These habitat units are generally heavily impacted by cattle trampling. While there will be some small amount of habitat suitability is isolated pockets, as the commenter states, the suitability for all life-stages is closer to zero than 0.25.	This practice of rounding habitat suitability values to 0 is unconservative and is leading to the undervalueing of habitats impacted by the mine as well as baseline conditions for the compensation site. The works as proposed are overly optimistic and appear to be minimizing the extent of impacts while maximizing results of predicted results of restorative works.	The assignment of habitat suitability values on a range of 0 to 1 with 0.25 increments does not apply a bias in either direction (i.e., conservative or unconservative). While it is correct that rounding some values down to 0 understates the 'true' value of a unit of habitat, the corresponding rounding of some values up to 1.0 similarly overstates the 'true' value of a different habitat unit. Approximation is a limitation of using any numeric system to describe a natural condition. Numeric limitations aside, the assignment of HSI values is based on a detailed evaluation of habitat suitability by a team of experienced qualified professionals (AMEC/Tom Gast) using published literature and modified with site-specific baseline field data. The habitat type/class system and the values used in the HSI calculations are sourced from The Fisheries Mitigation and Offsetting Plan (FMOP), which is Annex C of Appendix 5.1.2.6C of the Application for an Environmental Assessment Certificate/Environmental Impact Statement Assessment of Potential Environmental Effects (2014), prepared by Amec on behalf of NewGold. Justification for the development of each habitat class/type and the assignment of HSI values is described in detail in this document. To adapt the FMOP's habitat evaluation procedure (HEP) to apply to the offsetting/compensation projects, some modifications were made to the original system. These changes and their rationales are described in the document titled Habitat Evaluation Procedure (HEP) for Blackwater Project - Fisheries Offsetting Plan (TGAEC, 2021; Appendix J of the Fisheries Act Authorization Application package). The HEP process was applied equally to both the habitat losses and gains to ensure accurate accounting and to specifically avoid under- or over-valuing of habitats. In response to the reviewer's concern that gains are overly optimistic and losses	See proponent response.
89	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.9. Success Criteria for the Murray Creek and Greer Creek Habitat Enhancement Projects Appendix G_Offset Effectiveness Monitoring Program_2021_07_21 Formatted	Fish Utilization metrics are indicated as "comparable to pre-restoration and reference site data". Please revise: 1. Provide sufficient detail of a methodology that will ensure we have the data needed to best assess whether there are improvements in fish densities resulting from the works (i.e.. number or sites, locations of reference and study area sample sites, power analysis, methods to be used for both sampling and statistical analysis). 2. Detailed description of how the comparisons will be made between baseline and post-construction 3. Detailed description of how this work will tie into the "Proposed Research Programs" included as complementary measures.	Comment acknowledged. Revision of sampling design and metrics/indicators is ongoing. Further discussions with First Nations and DFO are proposed to establish acceptable monitoring study designs. The EMP will be updated following completion of these discussions.	-	The methodology in the plan is still exeedingly vague and includes metrics of success such as "comparable to pre-restoration and reference site data". From the reviewers perspective this is basically meaningless as everything is "comparable". Methods described in Reconnaissance 1:20,000 Fish and Fish Habitat: Standards and Procedures (BC Resource Inventory Committee, 2001) are not descriptive enough to provide the detail on habitat required to monitor the effectiveness of the works. The methods call for Fish Habitat Assessment Procedures to also be used for monitoring however to our knowledge there is no baseline data. If FHAP is to be used for monitoring then baseline data must be collected. We have detailed HEP data so this should be used for the monitoring. The methods for monitoring include no mark recapture work to evaluate population abundance for baseline or post-construction. PIT tagging or marking of some sort should be used to give us an idea of how many fish are captured vs how many are likley actually present. There is litle detail on "fish monitoring stations" such as where exactly they are proposed, how big the sites will be and which methods exactly will be used at each site. Are these streams too large for electrofishing to be a viable method of assessment and will snorkelling be required? One reference site will provide no variation for reference. It should be crear what the purpose of the reference sites is. Are they references of impacted sites that have had no works or are they reference sites for unimpacted areas that we are trying to achieve a tradgectory towards. At least three reference sites are recommended for each of these scenarios for each stream and these should for sure be selected before hand with locations/ descriptions provided before construction so that it is clear what the .	For Table 2-1 the comparison of fish presence, abundance, and size-class distribution with both pre-restoration data and a reference site is important to determine if the variable being measured is improving compared to that baseline. The comparison with a reference site is important to account for seasonal and annual natural variation. FHAP Level 1 survey has been added in place of the 1:20,000 Reconnaissance RISC surveys in Table 2-2 of Appendix P Fisheries Offsetting Monitoring Plan. Baseline data is being collected at each site to compare against long-term monitoring data. Currently only one reference site is planned for the majority of planned studies. BW Gold is willing to further discuss the number of reference sites and their locations with the Nations during the ongoing bi-weekly fisheries meetings. Mark-recapture methods are not currently proposed for Murry and Greer creeks. Instead, the proposed fish capture plan will provide relative abundance measurements at the sampling sites. This will include assessment of fish community composition, abundance, condition, size distribution, and catch per unit effort (CPUE) that will be used to evaluate effects on fish. Sampling methods used in the ongoing pre-restoration surveys require site-specific adaptation, due to variable channel conditions. Backpack electrofishing of closed sites is used preferentially at shallow, wadeable sites (e.g., Murray Creek, lower Greer Creek) and a combination of minnow trapping and large basket trapping is used at deeper sites that are unsuitable for safe wading (e.g. upper/middle Greer Creek). Benthic invertebrate sampling and monitoring will be added to the EMP. CABIN kicknet-based sampling will be used where possible (e.g., Murray Creek and lower Greer Creek). However, kicknet sampling at Upper/Middle Greer is unlikely to be	See proponent response.
90	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.10. Success Criteria for the Murray Creek and Greer Creek Habitat Enhancement Projects Appendix G_Offset Effectiveness Monitoring Program_2021_07_21 Formatted	"Flow and water levels are consistent with design to provide fish habitat and/or maintain habitat function, in consideration of natural fluctuations." Please provide: 1. the baseline flow and water level data required to measure this or a detailed plan on how and when this will be documented before the works are undertaken. 2. The methodology of how the data to compare to baseline will be obtained 3. Detailed description of how the comparisons will be made between baseline and post-construction 4. Detailed description of how this work will tie into the "Proposed Research Programs" included as complementary measures.	Instream transects to assess water depth, width, velocity and discharge will be included in the methodology. Revision of sampling design and metrics/indicators is ongoing. Further discussions with First Nations and DFO are proposed to establish acceptable monitoring study designs. The EMP will be updated following completion of these discussions.	-	It appears as though none of the above information requests have been provided.	Instream transects to assess water depth, width, velocity and discharge have been added to be included in Section 2.2.2 of Appendix P Fisheries Offsetting Habitat Effectiveness Monitoring Plan. Detailed monitoring study designs are included in the separate 2021 Blackwater Field Report. Baseline and post-construction comparisons will be made using each metric and year-over-year statistical assessments (p<0.05) in a Control Impact design. The reference to statistical comparison has been added to each comparison in Appendix P Fisheries Offsetting Habitat Effectiveness Monitoring Plan. All the baseline and long-term monitoring data collected will made available to the researchers involved in the Complementary Measures research programs. This data sharing has now been stated explicitly in Section 10.4.5.1 of the application.	See proponent response.

91	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.103 10.4.5 Complementary Measures	The formation of an advisory group proposed after the research topics and teams are selected is putting the cart before the horse. Unfortunately we do not have a time machine so we will find a way forward. The complementary measures have some of the greatest potential long term benefits for our Nations. However, our Nations must work with the research teams to modify study plans in a manner that will directly assess the impacts of the Blackwater mine and the success of the associated multiple fisheries/wetland compensation/offsetting projects. This will likely include data governance agreements and the collection of data within the mine/compensation/offsetting areas by the Research Teams themselves and the integration of ongoing effects monitoring data into research databases. This will allow the integration of academia, industry and First Nations in a transparent manner providing a clear path for high level - long term capacity building for the Nations through our beloved academic infrastructure.	The presented complementary measures research proposal will incorporate First Nations inputs. To advance the proposal to this stage and to target discussion, an outline of proposed research was required. Feedback from First Nations on specific research goals or any other aspects of the research plan is welcomed. The complementary measures plan includes an advisory group that includes First Nations. This group will steer the implementation of the plan to ensure that First Nations' interests are at the forefront of the work. Data sharing is a key aspect of this work - data sharing agreements will be established once research goals are agreed upon. It should be noted that the original intent of the complementary measures proposal was not to directly address mine impacts. Numerous plans already address the long-term monitoring of the mine site. The complementary measures proposal is instead intended to address knowledge gaps associated with fisheries management that are directly relevant to First Nations fisheries managers and other fisheries scientists. If the advisory group indicates that their preference is to evaluate mine impacts or effectiveness monitoring, this could be explored further.	To advance the proposal to this stage and to target discussion, an outline of proposed research was required. Feedback from First Nations on specific research goals or any other aspects of the research plan is welcomed. The complementary measures plan (see details in Appendix H) does include an advisory group that includes First Nations. This group will be initiated in Q3 of Year 1 and will meet on an annual basis to steer the implementation of the plan to ensure that First Nations' interests are at the forefront of the work. BW Gold acknowledges that the proposed complementary measures were identified without input from potentially affected Indigenous Nations. However, they were identified with knowledge of past and ongoing impacts to fisheries in the upper Fraser River watershed and are in alignment with research being conducted by researchers at UNBC. As indicated in the Offsetting Plan, BW Gold welcomes input on the research programs being proposed as the complementary measure included in the FAA application, either through the Advisory Group that BW Gold intends to strike following receipt of the FAA or on a company to Nation basis. The research objectives, study objectives, and methods for these complementary measures will not be finalized until input is received from Indigenous Nations, the Province of BC, and DFO.	Will the advisory committee be similar to our review experience where we are basically tied up in a bunch of meetings but our concerns are rarely addressed through meaningful changes to plans? Let's work out how these complementary measures can actually help build the capacity of the Nations to manage our shared ecosystem assets before they are approved. For example, the Thermal Ecology of Rainbow Trout in the Stellako River looks like a great study so how do we incorperate this sort of thermal monitoring to the compensation sites proposed. Temperature is likley a key driver of population density and we currently have minimal plans to understand temperature at our sites. Can Eduardo help us set up the monitoring plan so we get the data to understand if there are enough accumulated thermal units between chinook emergence and outmigration that parr have a good chance of survival/return. How do we place the structures in the locations with the best thermal regimes so that the habitat and the temperatures align for highest production? Can we map the temperature profiles at these sites before structure installatoin?	A commitment to demonstrate how feedback from the scientific advisory group is integrated into study design has been added to Section 10.4.5.1. Further questions about the study design will have to be relayed to the research program leads once the Complimentary Research Programs have commenced.	Complementary measures are expected to provide data and research related to maintaining or enhancing the conservation and protection of fish and fish habitat, which can be used to inform fisheries management objectives and priorities. They generally do not give rise to measurable, on-the-ground conservation outcomes. DFO is considering including a condition such as: 1) Prior to initiating the complementary measures, the proponent shall convene a workshop with the Collaborative Technical Working Group. Recommendations of the participants in the workshop shall be documented and considered for incorporation into the complementary measures program.
92	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.103 10.4.5 Complementary Measures	"This proposal includes funding for the creation of up to three First Nation research assistant positions to support the proposed research programs that are up to four months long." Revise to include details of and funding for: 1.First Nations representatives to work together with Research Teams to modify study plans to be directly applicable to our Nations capacity to assess the impacts of the Blackwater mine and the success of the associated multiple fisheries/wetland compensation/offsetting projects (ex. specifics on how research methodologies will include data collection/analysis within impacted and offsetting sites). 2.Additional First Nations positions (technician and otherwise) should that be an action item resulting from these consultations. 3. Formation of data governance agreements and planning for the collection of data within the mine/compensation/offsetting areas by the Research Teams themselves and the integration of ongoing effects monitoring data into research databases. Objectives of agreements is to provide data and capacity for our Nations to directly assess the impacts of the Blackwater mine and the success of the associated multiple fisheries compensation/offsetting projects. 4. Find and catalogue fisheries/wetland compensation/offsetting project opportunities so that we can direct investments towards projects of our own design in the future.	The funding associated with First Nations research assistants can be reallocated as the advisory group sees fit. The proposed funding design is flexible and can readily be adjusted to include other positions, as the commenter suggests. The intent of identifying the proposed allocation for the research assistant position was to clearly designate funding for First Nations direct participation in the work. Formation of the advisory group (composed of First Nations representatives, regulators, and subject-matter experts) to drive this work is a key first step, once the concept of complementary measures is accepted by both DFO and First Nations as a suitable offsetting measure. Once the group is established, it can identify key research aims and lay out a detailed plan for meeting those research goals. These goals may include the proposed research efforts or may include additional or substitute projects. It should be noted that the original intent of the complementary measures proposal was not to directly address mine impacts. Numerous plans already address the long-term monitoring of the mine site. The complementary measures proposal is instead intended to address knowledge gaps associated with fisheries management that are directly relevant to First Nations fisheries managers and other fisheries scientists. If the advisory group indicates that their preference is to evaluate mine impacts or effectiveness monitoring, this could be explored further.	The funding associated with First Nations research assistants can be reallocated as the advisory group sees fit. The proposed funding design is flexible and can readily be adjusted to include other positions, as the commenter suggests. The intent of identifying the proposed allocation for the research assistant position was to clearly designate funding for First Nations direct participation in the work. Formation of the advisory group (composed of First Nations representatives, regulators, and subject-matter experts) to drive this work is a key first step, once the concept of complementary measures is accepted by both DFO and First Nations as a suitable offsetting measure. Once the group is established, it can identify key research aims and lay out a detailed plan for meeting those research goals. These goals may include the proposed research efforts or may include additional or substitute projects. It should be noted that the original intent of the complementary measures proposal was not to directly address mine impacts. Numerous plans already address the long-term monitoring of the mine site. The complementary measures proposal is instead intended to address knowledge gaps associated with fisheries management that are directly relevant to First Nations fisheries managers and other fisheries scientists. If the advisory group indicates that their preference is to evaluate mine impacts or effectiveness monitoring, this could be explored further. The results of the research conducted as part of the complementary measures will be made publicly available, through UNBC, and as research is published in peer-reviewed journals or student theses.	We unfortunately have low confidence that our input will be meaningfully incorperated into the complimentary measures vs " provide input" to check boxes off vs acually steer actions. We have seen no meaningful movement on this over the last 10 months except well written responses that address none of the revisions requested.	A commitment to demonstrate how feedback from the scientific advisory group is integrated into study design has been added to Section 10.4.5.1.	Complementary measures are expected to provide data and research related to maintaining or enhancing the conservation and protection of fish and fish habitat, which can be used to inform fisheries managment objectives and priorities. They generally do not give rise to measureable, on-the-ground conservation outcomes. DFO is considering including a condition such as: 1) Prior to initiating the complementary measures, the proponent shall convene a workshop with the Collaborative Technical Working Group. Recommendations of the participants in the workshop shall be documented and considered for incorporation into the complementary measures program.
93	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.99 - 101 10.4 Detailed Description of Offsetting Projects	"The plant selection was based on field reconnaissance, drone imagery, common vegetation community summaries described in BC's Wetland Identification Guide (Mackenzie and Moran 2004) and BC's Biodiversity Atlas (Austin and Eriksson 2009), restoration papers, and guidance documents." This background and detailed prescriptions are very important since the establishment of riparian areas is a major contributor to the increase in the instream HEP units proposed in the plan. Please provide section detailing this work with detailed descriptions for both: 1. Each of the study areas (Greer, Murray, Creek 661, Lake 15/16 connector channel) and 2.associated reference riparian areas for each of the study areas. Data required for both 1 and 2 is: BEC and wetland classifications, plots showing species compositions/% cover (predicted plot data for proposed project sites).	More detailed information is needed to respond to this comment. Two tasks are currently underdevelopment for each offsetting site: a pre-restoration characterization of existing conditions and a detailed planting plan. A site-specific characterization of the existing plant communities at the offsetting sites will be conducted in 2022. The main objectives of this survey will include assessment of existing vegetation diversity and abundance, evaluation of existing conditions that may influence the success of planting, and documentation of invasive, agronomic, or at-risk plant species (refer to Ecologic's 2022 Vegetation Work Plan that was provided in February 2022). A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Two tasks are currently under development for each offsetting site: a pre-restoration characterization of existing conditions and a detailed planting plan. A site-specific characterization of the existing plant communities at the offsetting sites will be conducted in 2022. The main objectives of this survey will include assessment of existing vegetation diversity and abundance, evaluation of existing conditions that may influence the success of planting, and documentation of invasive, agronomic, or at-risk plant species (refer to Ecologic's 2022 Vegetation Work Plan that was provided in February 2022). A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground preparations, planting locations, species, and densities. This plan will be developed by a Qualified Professional with input from First Nations.	A pre-restoration characterization of existing conditions and a detailed planting plan have not been provided and from the perspective of the reviewer are required for this compensation to be considered complete.	Please refer to the response to comment #17.	See proponent response. Ecologic baseline report has been provided with characterization of existing conditions and planting prescriptions.
94	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendices E	Planting of shrub clusters 12m apart is far too sparse to result in meaningful riparian cover. Please: 1. revise and include more appropriate prescriptions with target densities/percent cover referenced. 2. Reference the predicted HEP conditions as an appropriate measure of target percent cover for riparian areas. 3. Provide details on how this work will tie into the "Proposed Research Programs" included as complementary measures.	More detailed information is needed to respond to this comment. Two tasks are currently underdevelopment for each offsetting site: a pre-restoration characterization of existing conditions and a detailed planting plan. A site-specific characterization of the existing plant communities at the offsetting sites will be conducted in 2022. The main objectives of this survey will include assessment of existing vegetation diversity and abundance, evaluation of existing conditions that may influence the success of planting, and documentation of invasive, agronomic, or at-risk plant species. A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed	Two tasks are currently under development for each offsetting site: a pre-restoration characterization of existing conditions and a detailed planting plan. A site-specific characterization of the existing plant communities at the offsetting sites will be conducted in 2022. The main objectives of this survey will include assessment of existing vegetation diversity and abundance, evaluation of existing conditions that may influence the success of planting, and documentation of invasive, agronomic, or at-risk plant species (refer to Ecologic's 2022 Vegetation Work Plan that was provided in February 2022). A site-specific planting plan will be developed in advance of offset construction that includes a detailed description of existing plant communities and proposed ground	A pre-restoration characterization of existing conditions and a detailed planting plan have not been provided and from the perspective of the reviewer are required for this compensation to be considered complete.	Please refer to the response to comment #17.	See proponent response. Ecologic baseline report has been provided with characterization of existing conditions and planting prescriptions.
95	3-Dec-21	LDN/UFN	Al Irvine	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	P.9. Success Criteria for the Murray Creek and Greer Creek Habitat Enhancement Projects Appendix G_Offset Effectiveness Monitoring Program_2021_07_21 Formatted	Percent cover of riparian vegetation is a more appropriate metric of success than survival as this is the actual objective of the works. Plant mortality is often high but percent cover can be adequate to meet objectives if those objectives are stated at the beginning. 1. Revise monitoring plan to include measurement of percent cover of restored riparian areas. 2. reference HEP predicted conditions to measure effectiveness and reference details of Work Plan to complete this (Appen. 3. Provide details on how this work will tie into the "Proposed Research Programs" included as complementary measures.	The effectiveness monitoring plan already includes both survivorship and vegetation percent cover, so no additional change is needed. As referenced in the comment in Row 91 of this document, HEP re-evaluation will be included in the Authorization Application. Complementary measures research does not include effectiveness monitoring, as previously described.	The effectiveness monitoring plan includes both survivorship and vegetation percent cover, so no additional change is needed. HEP re-evaluation will be included in the Authorization Application (see comment response in Row 91 of this document). Complementary measures research does not include effectiveness monitoring.	Riparian restoration is a key part of the overall plan to compensate for impacts due to the mine. Structural layer is an important part of describing vegetation. Saying that a 5 - 10 % increase in "percent cover" is a measure of success is not adequate. If we look at a riparian area currently comprised of agronomic grasses the percent cover may be 90 or 100%. We cannot describe change in structure over time (ie. growth of a shrub and tree layer) without breaking it out into layers and sub-layers (ex. tall shrub layer, low shrub layer, herb layer etc.) More detail is required on how percent cover will be calculated and we suggest using standardized procedures and documenting as per the Land Management Handbook 25. https://www.for.gov.bc.ca/hfd/pubs/Docs/LMH/LMH25/Lmh25_ed1_(1998).pdf . This needs to be in the methods.	As suggested, the success criteria for riparian cover restoration for measuring change in structure over time will be changed to the standardized procedures and documenting as per the Land Management Handbook.	Refer to proponent's response regarding changes. Also, DFO is considering including a success criteria condition in the authorization such as: 1. A representative native riparian community will be established within new or restored riparian areas. Planted vegetation will achieve 70% survival at year 3, and will provide a minimum of 90% cover of the new or restored riparian area by year 10. In addition, DFO is considering requiring offset effectiveness monitoring in years 1, 2, 3, 5, 7, and 10 following construction of the offset.
96	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.4.1, page 38	The first sentence of page 38 states that groundwater contributes approximately 90% of streamflow over 9 months of the year for Davidson Creek. Is much known about the location of the underground aquifer system at the project site and how excavation of the open pit and other mine structures will affect the flow of groundwater? Are these considerations incorporated into the modelling done to date?			Open	Groundwater was extensively examined for the baseline groundwater quantity (Appendix 5.3.5A of the Application/EIS) and the potential Project effects on groundwater (Section 5.3.5 Groundwater Quantity of the Application/EIS). Only minor, not significant residual effects were predicted for groundwater quantity that are TSF-specific.	See proponent response

97	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.4.5, page 41	Please provide a description of Middle and Upper Chedakuz Creek in this section. Middle Chedakuz will be downstream of the mine and is considered impacted. Therefore it is important to understand what is currently there. Control sites are located in Upper Chedakuz, and it would be useful to understand the types of habitat there for complete context.			Open	General fish habitat and fish use information from Appendix 5.1.2.6A of the Application/EIS (AMEC 2013a) has been added to Section 5.4.5 for middle and upper Chedakuz Creek.	See proponent response
98	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.4.5, page 41	"Middle Chedakuz Creek (from the confluence of Creek 661 to Tatelkuz Lake) and lower Chedakuz Creek (from the outlet of Tatelkuz Lake to the confluence with Turtle Creek) are within the LSA of the Project." I was under the impression that Middle Chedakuz Creek was from Tatelkuz Lake to Kuyakuz Lake? Because you refer to the section between Creek 661 and Kuyakuz also as "middle Chedakuz" in section 5.5.2: "In middle Chedakuz Creek, Kokanee spawn in the mainstem between Kuyakuz Lake and the Creek 661 confluence." Please revise for clarity as to where Middle Chedakuz starts/ends, and also add where Upper Chedakuz Creek starts/ends.			Open	Middle Chedakuz Creek does flow the entire length from Kayakuz Lake to Tatelkuz Lake. However, the section of Middle Chedakuz Creek that is part of the LSA starts at its confluence with Creek 661 due to potential Project effects on Creek 661. Upper Chedakuz Creek flows southwest into Kayakuz Lake from its headwaters.	See proponent response
99	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Table 5-2, page 43	Are Kokanee confirmed absent from Creek 705?			Open	Over 2,300 fish were captured in Creek 705 (electrofishing and hoop nets) and its headwater lakes (gill nets) during two years of baseline sampling (Appendix 5.1.2.6A of the Application/EIS, AMEC 2013a) without catching any Kokanee.	See proponent response.
100	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.5.1, page 44	"Stream spawning habitat for the headwater lake population is limited to small patches (less than 50 m2) of gravel in Reach 11 of Davidson Creek, or upstream of the Lake in small tributaries." In comment ID 57 in the Schedule 2 ITT, the figure of 50 m2 has been reduced to ~3 m2. Can you explain this change? How did you derive the original and new figures?			Open	The quoted sentence from the FAAA refers to the total available stream spawning area accessible to Rainbow Trout in Lake 16. From Section 5.2.2.3 of the Fisheries Mitigation and Offsetting Plan (Appendix 5.1.2.6C of the Application for an Environmental Assessment Certificate/Environmental Impact Statement Assessment of Potential Environmental Effects), there was a total of 9 m^2 of potential spawning habitat in Reach 11 of Davidson Creek and 18 m^2 of potential spawning habitat in "one small headwater tributary that enters the lake along its southern shoreline". This total (27m^2) of available potential spawning was summarized as the total available spawning area in the FAAA as "less than 50 m^2", although a more accurate approximation might have been "less than 30 m^2". These values are the areas identified during the baseline survey program conducted from 2011-2013. The writing of this section of the FAAA predated the completion of the 2021 Field Survey Report. The quoted 3.8 m^2 of spawning habitat in Comment ID 57 of the Schedule 2 ITT is the amount of spawning habitat that was identified only in Reach 11 of Davidson Creek (not including Reach 12 of Davidson Creek or the upstream small tributary to Lake 16) during field surveys conducted in 2021 (Section 2.1.2.2.1 of the Blackwater Fold Project Fish and Aquatic Resources 2021 Field Survey Report, Palmer 2022). The ID 57 comment referred to spawning quantification in Reach 11, so we provided the most up-to-date value of observed spawning habitat.	See proponent response.
101	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.5.2, page 45	"In middle Chedakuz Creek, Kokanee spawn in the mainstem between Kuyakuz Lake and the Creek 661 confluence." What about the section of Chedakuz downstream of of Creek 661 to Tatelkuz lake? I recall reading in baseline reports that there were spawners in this section too.			Open	The fact Kokanee also spawn upstream of Tatelkuz Lake in middle Chedakuz Creek (Appendix 5.1.2.6A of the Application/EIS, AMEC 2013a) has been added to Section 5.5.2.	See proponent response.
102	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	5.6, page 47, section 10.4.2, page 112	The statements made in section 5.6 about limitations to KO and RBT productivity appear to be based on assumptions rather than empirical evidence. Limiting factors to population growth are complex and require rigorous studies to determine. While the reviewer can accept that the proponents are simply theorizing the factors limiting fish populations in the study area, the proponents must acknowledge these assumptions and their risks when using them as justification in developing offsetting programs. For example, the abundance of spawning habitat in the study area does not necessarily eliminate it from being a limiting factor. Evidence such as saturation of spawning gravels with redds, and superimposition of redds can indicate limitation even when spawning habitat is abundant. In section 10.4.2, the following statement is made: "The paucity of overwintering habitat has been identified in the baseline studies as a key factor limiting fish production in the Davidson Creek and Creek 661 watersheds." What specific baseline data is this based on? It has been indicated in some of the proponent's internal comments that there is not enough data to make inferences about productivity. Therefore, the reviewer is of the opinion that identifying overwintering habitat as a limiting factor to productivity is not appropriate. Perhaps it would be more accurate to reword this sentece to indicate that there is little overwintering habitat.			Open	The sentence in Section 10.4.2 has been reworded to state overwintering habitat has been identified as a potential key factor limiting fish production. Empirical determination of each limiting factor in fish production for the Davidson Creek Watershed would require years of specifically designed studies examining food production, spawning habitat, overwintering habitat, and climate variables. The statements on potential factors limiting production are based on the best available knowledge of other stream systems by professional biologists.	See proponent response.
103	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.1.2, page 51	Last bullet point: why is spawning KO not listed as potentially affected in Creek 661 due to flow changes? Was this not calculated in habitat losses?			Open	The bullet points in Section 6.2.1.2 list instream habitat loss due to Project infrastructure. Although Kokanee do spawn in Creek 661, their spawning range is limited to the lower reaches, and the magnitude of flow changes in these lower reaches is expected to be low. This bullet point will be amended to include the potential for flow alteration to affect Kokanee spawning.	See proponent response.
104	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.2 to 6.2.4 page 52-54	It is unclear whether there will be use of closed-bottom crossing structures for the FWSS pipeline, or only open-cut trenches and clear span bridges. Closed-bottom crossings are no longer considered good practice, require more maintenance, and thus should not be used for fish-bearing watercourses.			Open	Section 6.2.2.1 Freshwater Pipeline states all eight fish-bearing streams along the FWSS pipeline ROW will be crossed by open-cut trenches and clear span bridges. Steams locations where open-cut trenches are used will be isolated and a fish-salvage performed prior to trenching and burying of the pipeline.	DFO is considering including a condition such as: 1) All road crossings over fish-bearing streams will be clear-span crossings, constructed according to the DFO code of practice for clear-span crossings: https://www.dfo-mpo.gc.ca/pnw-ppe/codes/clear-span-bridges-ponts-portee-libre-eng.html 2) Stream crossings for the freshwater supply system pipeline will be clear-span, or will be installed below the channel using open-cut trench, constructed without altering the natural alignment, grade, or invert of the watercourse.

105	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	6.2.6, page 55	Why is a similar assessment (Potential effects on productivity) not done for KO spawners?			Open	Rainbow Trout are residents of Davidson Creek and Creek 661 and may be affected by any changes in stream productivity. Kokanee migrate to these streams only to spawn, during which time they do not feed and are unaffected by productivity of a particular stream.	See proponent response.
106	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix G Memo on Rainbow Trout productivity	The language in this memo seems to suggest that the lower portions of Davidson Creek and Creek 661 is not at carrying capacity and will be able to compensate to some extent the losses in the upper watersheds. Do you have evidence to support this? If not, this should be acknowledge as an assumption.			Open	The provincial biostandards provide the only available estimate for stream carrying capacity, which for Davidson Creek is a recommended maximum fish density for Rainbow Trout of 9.7 fish per 100 m2 (Palmer 2022). Existing fish densities for Davidson Creek (2.27 fish per 100 m2) and Creek 661 (1.13 fish per 100 m2) were estimated from data derived from fisheries baseline data (Appendix 5.1.2.6A of the Application/EIS, AMEC 2013a) collected at sites within the affected streams. Palmer. 2022. Blackwater Project Fish Salvage and Relocation Plan. Prepared for BW Gold Ltd. by Palmer, February 4, 2022.	See proponent response.
107	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	8.4.2.2 page 87 Downstream flow alteration; Appendix D	"When considering a range of potential climate scenarios, under the scenario of a drier than average year there is a 25% likelihood that the IFN in Davidson Creek may not be met during the first 5 years of Operations." Is the above statement due to climate effects alone or also due to diversions to fill the FWR and WMP in the first 5 years? In reading appendix D, is my understanding correct that there will be no other flow alteration to Davidson Creek besides these diversions? The proposed temporary threshold of 0.07 m3/s for years 1-5 during Kokanee migration and spawning season (July-Aug) is considerably lower than the average streamflows encountered during those months (baseline data shows 0.144-0.623 m3/s for July and August). In order to protect Kokanee spawners, the temporary threshold should be adjusted to reflect modelled IFNs of 0.3 m3/s for July 1-15 and 0.15 m3/s for July 16-Aug 31. That is, no diversions for the filling of FWR and WMP should be allowed when flows are below these thresholds. It does not make sense to be diverting flows during this sensitive lifestage.			Open	"Climate is a controlling driver in the ability to meet IFN in early years of mining (Knight Piesold 2022). As discussed in Knigt Piesold (2022), the simulated streamflows at H2B do not always meet IFN values during the baseline period. In fact, the simulated minimum and 5th percentile baseline flows at node H2B are lower than IFN for all months of the year. The simulated 50th percentile flows during the baseline period are lower than IFN during February, March, and June. Given this control of climate on the baseline flows, it is the primary influence during early operations affecting the ability to meet IFN criteria during the driest conditions. Appendix D is related to the Construction phase only. Water diverted around the TSF contributes to the WMP and then the FWR. The Construction IFN Memo (Appendix D; Palmer 2022) details the IFN plan for the Construction period. This plan supports the ecological and physical processes of Kokanee migration, spawning, and egg incubation. Water withdrawal from Davidson Creek would only be allowed when the natural discharge in Davidson Creek exceeds the temporary threshold (0.07 m3/s), with the actual instream flow immediately downstream of the FWR meeting the temporary threshold, at a minimum. This means the WMP and FWR are typically filled during freshet and the stored volume is pumped down during the lower flow months, which are typically in the late summer and winter. Reference: Knight Piésold Ltd., 2022. Issue Tracking Table IDs 498, 506 & 583 – IFN at Water Balance Model nodes H2B and 15-CC. Prepared for CSFN. June 30, 2022. Please see attachment "R1_CSFN Comment IDs 498, 506 583.pdf"."	See proponent response.
108	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	8.4.1.4 page 67	Did the area weighted suitability (AWS) consider spawning habitat lost (and potentially gained) through changes in flow hydraulics? Salmonids have been shown to select spawning hydraulics within a narrow range of Froude numbers. If Froude numbers change as a result of flow alterations, have the losses in preferred spawning area been accounted for?			Open	Habitat suitability criteria (HSC), used within SEFA, allow for fish habitat (area weighted suitability; AWS) to be estimated based on hydraulic parameters such as substrate composition, water velocity, and water depth. During the modelling workflow, SEFA conducts hydraulic calculations that simulate changes in velocity and depth at different discharges. Habitat loss/gain calculations explicitly quantify how changes to the depth and velocity hydraulic parameters impact available habitat. HSCs quantify fish species' preferences for depths and velocities, and do not consider Froude numbers explicitly. Therefore, Froude number itself is not explicitly considered in the calculation of area weighted suitability. However, since depth and velocity are the two variable inputs to Froude number, changes to Froude number are implicitly considered in this modelling framework.	See proponent response.
109	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Table 10-3, page 125	Counting both RBT and CH habitat units in the same stretch of creek is double-counting and reduces the level of effort required by the proponent to offset losses. While the reviewer acknowledges the two species occupy mostly different niches, double-counting shared niches (overlapping areas) does not result in fair accounting.			Open	A memo has been developed to respond to a similar question from DFO (IR #17) about calculating habitat loss and gain for multiple fish species (Palmer 2022). This memo will be sent to the Nations for review. In short, the inclusion of two species in the habitat equivalency calculations for both gains (i.e., Rainbow Trout and Kokanee) and losses (i.e., Rainbow Trout and Chinook Salmon) is an appropriate expression of the expected negative and positive impacts to the fish communities in the affected watersheds.	See proponent response and referenced memo. DFO understands that the HEP approach assists in describing the value of losses and gains using habitat units and incorporating various factors associated with fish habitat value, however DFO will also consider the total areas of losses and gains during the review process.
110	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.7, page 127	If the FWSS does not operate as expected and does not fully offset losses in usable habitat, are there commitments from Blackwater to quanitfy these losses and adopt additional offsetting as required?			Open	The ability for the water management systems, including the mine area water management structures and systems, the FWR, and FWSS to provide adequate habitat and maintain fish health in Davidson Creek will be assessed through an effectiveness monitoring program. The results of this monitoring program will be used within an adaptive management framework, to make future modifications to the IFN for Davidson Creek. If, at any time, the monitoring indicates that discharge is dropping below the relevant threshold, water levels are too low or that increased water temperatures may threaten fish or fish habitat, remote monitoring frequency will be increased to a twice-daily level and daily field-based surveys of fish habitat and fish stranding will be conducted. If excessive channel drying or fish stranding is identified by a qualified professional, then the minimum flow threshold will be increased. Flow thresholds will be increased in 5% MAD increments (i.e., 25% MAD, 30% MAD, etc.) until BW Gold's qualified professional and relevant regulatory authorities are satisfied that fish and fish habitat are not threatened. These procedures will be used to ensure further permanent habitat losses do not occur and additional offsetting is not required.	DFO is considering conditions to manage the FWSS as a component of the project mitigation. As such, the operation and adaptive management of the FWSS will be regulated through conditions of the authorization. If the FWSS does not operate as expected, then contingency measures would be required to address any decifiencies. DFO is considering authorizing the operation of the FWSS for a specified duration, to be reauthorized for continued operation at a later date. This would allow for any lessons learned over the intial operating period to be incorporated in new conditions, including potentially additional offsets.

111	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.7, page 129	The reasons provided for a less than 1:1 riparian offsetting are insufficient for the following reasons: Bullet 1: The reviewer disagrees with the notion that the headwater riparian areas are disporportionately large. Headwaters naturally have large riparian areas due to the density of streams, but these areas cumulatively contribute to the overall health of the creek. The proponent has calculated riparian losses based on relatively small riparian margins of 15 m and 5 m for fish-bearing and non fish-bearing status, respectively. Therefore, offsets should make up for the losses as calculated accordingly. Bullet 2: The creation of offchannel ponds is not good justification for reducing riparian offsets, as additional exposed banks can be identified and restored elsewhere in the region. The proponent has indicated that agricultural land use and associated bank erosion/riparian clearing is a widespread problem. It should not be an issue to find additional riparian offsetting measures. Bullet 3: The reviewer makes a similar point as Bullet 2 - if there are not enough riparian areas to restore in the currently proposed creeks, the proponent should look for additional sites to conduct riparian restoration. Finally, while the reviewer acknowledges the restored creeks			Open	The previous riparian offsetting ratio of 0.71:1 is subject to ongoing discussion with DFO and First Nations. The target 1:1 riparian replacement ratio is noted and the justification is understood. **Please refer to response to comment #14.** The revised riparian ratio is 1.74:1. The current ratios for instream area and instream habitat units are approximately 1.74:1 and 2.03:1, respectively. These instream values are being further refined pripr to submission of the application.	See proponent's response. Note that additional offsetting has been proposed in subsequent revision of the application.
112	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	10.4 page 106, 10.4.4 page 114	This document lacks information on design considerations and specifications for offsetting components (lake 15/16 conector, channel narrowing for Murray and Greer Creeks, Creek 661 off channel pools) 1) In determining final channel dimension at Murray and Greer Creeks, along with the Lake 15/16 connector, how will you consider local hydraulics and channel geometries to achieve site stability? 2) You provide some overwintering depths in the pools but those are not correlated to a range of flows. Can you provide the following information in a table: -design flows at important times of year (spring spawning, fall spawning, summer low flow, overwintering) i.e. what flows were you conducting modeling with? -water depths at those design flows In a similar comment for the Schedule 2 FCP, the proponent responded that site designs will be provided at a later date. However, some level of site design should have happened already to support calculating offsetting habitat gains. At the very least, design approach and considerations should be included in the current plan to demonstrate HOW the proponent plans on carrying out site-specific designs.			Open	Restoration opportunities, constraints, and rationale are provided in Section 10 of the FAAA and on the design drawings (Appendix N). 1) The main design restoration objectives for Murray and Greer Creeks are to inhibit cattle access to the channel, regrade localized sections where cattle have greatly impacted the banks, and plant riparian vegetation. Design specifications for Murray and Greer Creeks offsetting are primarily based on observed bankfull channel dimensions from nearby un-disturbed reference segments. Specifically, proposed bankfull dimensions are based on the bankfull widths, depths, and side slopes of existing, undisturbed channel as measured in the field through topographic surveys and in GIS. The proposed enhancements are not intended to create a 'stable channel' but allow natural processes (i.e., bank erosion, sediment transport etc.) to continue within the confines of the cattle exclusion fencing while supporting enhanced biological function. A hydraulic model is not required to size the proposed bankfull dimensions. Lake 15/16 Connector Arm will function as an extension of Lake 16. Proposed cobble and boulders and logs are habitat features and not included for stability. The Connector Arm has no gradient and will not transport the proposed cobble and boulders (> 200 mm). The water levels of the proposed Connector Arm is based on topographic surveys (fall 2016) and measured water levels in Lake 15 (Station L6) and Lake 16 (Station L5) (Knight Piesold 2017). The Connector Channel will function as a small headwater stream, connecting Lake 15 and Lake 16. The Connector Channel dimensions and stone sizing were established based on Upper Davidson Creek hydrological data collected at Station H10 (Knight Piesold 2017) and the proposed slope. A detailed hydraulic model is not	See proponent response.
113	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix P Table 2-2, page 15 EMP	FHAP is useful at the reconnaissance level, but not very appropriate for restoration monitoring. FHAP metrics should be modified to better target restoration objectives (and omit irrelevant metrics). Some relevant parameters that come to mind are: 1) # LWD, boulders, rootwads before and after restoration - tracks the initial increase and potential losses to freshet over time 2) area of spawning gravel before and after restoration - tracks whether gravels stayed within the restoration reaches 3) the reviewer notes that substrate composition will be monitored. Will they be monitored at set cross-sections over time, covering a representative sample of the restored areas? 4) cross-sectional profiles at set transects (does not have to be annual, but after significant freshets) There is little information on monitoring locations. Some of these parameters above will require surveying the entire length of the restoration site, while others will be at set locations (e.g. transects).			Open	FHAP surveys were performed at all monitoring locations in 2022 and the data will be presented in a 2022 Field Report. Previously only 1:20,000 reconnaissance surveys were performed. BW Gold is committed to reviewing input from the Nations on habitat survey procedures and data to be collected for future long-term monitoring during the ongoing bi-weekly fisheries meetings.	DFO is considering including conditions to ensure that offsetting achieves the stated objectives of the offset habitat. Although conditions will be specific to each offset DFO is considering including conditions to monitor success according to critera such as: 1) Channel bed, banks, and constructed habitat features (boulders, brush layers, and woody debris, spawning gravels), are stable, showing no indications of movement, slumping, erosion, sediment deposition or scouring, that may affect habitat functionality; 2) At constructed channel enhancements, flow, depth and water parameters remain consistent with the design specifications, and at a level that will provide connectivity and habitat for fish; 3) Summer (July – August) fish surveys confirm rainbow trout and juvenile chinook salmon relative abundance (fish per 100m) and size class distribution are statistically similar to pre-restoration and reference site. Three fish survey locations will be located in each restoration reach (Murray Creek, Upper, Middle, and Lower Greer) with a reference station located upstream of each reach. 4) Total organism abundance of benthic invertebrates is statistically similar to selected reference site. 5) A representative native riparian community is established within new or restored riparian areas. Planted vegetation will achieve 70% survival at year 3, and will provide a minimum of 90% cover of the new or restored riparian area by year 10. 6)Measures to exclude cattle are functioning effectively to prevent cattle from accessing the riparian or instream areas.
114	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appendix P Table 2-3, page 19; Table 2-5, page 30 EMP	For hydraulic function, it would be crucial to have design specifications incorporated into the effectiveness monitoring metrics (stable grain size, depths and velocities at different flows, flows/elevations at pond engagement) so that monitoring can ensure that sites are functioning as intended. Even if specs are not available now, the parameters themselves could be included in these tables.			Open	The requested design specifications currently are not available for the monitoring sites. The proposed cobbles and boulders are habitat features and not intended for stability. Once these specifications are available, they will be included in the effectiveness monitoring plan tables for comparison during long-term monitoring.	DFO is consdering including conditions to ensure that offsetting achieves the stated objectives of the offset habitat. Although conditions will be specific to each offset DFO is considering including conditions to monitor success according to critera such as: 1) Channel bed, banks, and constructed habitat features (boulders, brush layers, and woody debris, spawning gravels), are stable, showing no indications of movement, slumping, erosion, sediment deposition or scouring, that may affect habitat functionality;
115	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appdendix P EMP	Are monitoring timelines intended to be different for different offsetting components (years 1, 3, 5, 10 for some but 1, 3, 5, 7, 11 for others)? What processes/commitments are in place to have external review of restoration results after 10 (or 11) years to determine whether restoration was successful or if additional measures are needed? Will approval from regulators/Nations be required?			Open	The majority of monitoring programs are planned for years 1, 3, 5, and 10, with flow augmentation in Davidson Creek and vegetation plantings also being monitored in year 7. The one occurrence of a year 11 monitoring event was a mistake that has been corrected. If regulators deem that the offsetting fish habitat is not progressing effectively towards functioning as designed, they may direct specific remedial actions to ensure Project conditions are met. If, at the end of the first three years of monitoring, it appears that remedial work is not likely to achieve offsetting objectives, BW Gold (in consultation with DFO) will propose alternative offsetting works or modifications to existing works. If remedial measures are implemented, monitoring may be required for longer than the total ten-year period proposed here.	DFO is considering requiring offset effectiveness monitoring in years 1, 2, 3, 5, 7, and 10 following construction of the offset. DFO is considering conditions to manage the FWSS as a component of the project mitigation. As such, the operation and adaptive management of the FWSS will be regulated through conditions of the authorization. If the FWSS does not operate as expected, then contingency measures would be required to address any decifiencies. DFO is also considering authorizing the operation of the FWSS for a specified duration, to be reauthorized for continued operation at a later date. This would allow for any lessons learned over the intial operating period to be incorporated in new conditions, including potentially additional offsets.

116	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appdendix P EMP Section 2.4 page 22	This section is missing information about how the proponent will monitor streamflow to ensure adherence to IFNs.			Open	The following text has been added to Section 2.4.1: Flow and velocity measurements will also be obtained during the habitat assessment. In addition, a network of hydrometric monitoring stations is maintained and monitored throughout the region and these data will be compared with direct hydrology measurements at each offsetting stream to describe baseline conditions and will be used to assess the success of the enhancement works. The flow measurements described above are for the individual effectiveness monitoring programs. Long-term stream flow monitoring on Davidson Creek to maintain IFN is described in the Construction IFN Memo (Appendix D; Palmer 2022) as follows: At or immediately below the outlet of the FWR, a hydraulic structure or a hydrometric station with real-time data transmission capabilities will be used to monitor the instream flow within Davidson Creek. Data from this location will be recorded and used to evaluate whether the temporary threshold is being met. This data will also be made available to field-based operators that are responsible for making operational decisions about water withdrawals and pumping rates from Davidson Creek.	See proponent's response.
117	26-Oct-22	LDN/UFN	Brenley Yuan	Application for Authorization under Paragraphs 34.4(2)(b) and 35(2)(b) of the Fisheries Act (Non-Emergency Situations)	Appdendix P EMP	The Nations are concerned about the effectiveness of SROWs as a method to protect restored areas in perpetuity due to a lack of enforcement in remote areas. Continued discussion is needed on this topic.			Open	BW Gold held meetings to discuss the use of SROWs and restructive covenants as a mechanism to secure offsetting areas in November and December, including with legal counsel on both sides supporting the discussion. BW Gold has made a proposal to the Nations in regards to monitoing the offset areas by way of its Aboriginal Group Monitoring Plan EAC condition. This would provide a mechanism for the Nations to monitor and report on the offsets. While we understand the Nations have a concern about the effectiveness of the proposed form of securement, BW Gold is of the view that the SROWs and restrictive covenants are a viable way to protect the restored areas.	See proponent's response. Based on additional information provided by the proponent, DFO is of the opinion that the SROW is a reasonable approach to secure and protect the offset properties. DFO is considering including a requirement in the final reporting to describe and confirm the long term protection of the offset projects prior to release of the financial guarantee.

Exhibit 4
Schedule 2 Fish Compensation Plan (ITT)

Blackwater	Schedule 2 - Fish Habitat Compensation Plan (FP)																		
Tracking ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Comment Theme	Comment	Response	Consistence with KIOC Fish Habitat Compensation Plan	Round 2 Comment Date	Round 2 Comment	Round 2 Response	Round 3 Comment Date	Round 3 Comment	Round 3 Response	Round 4 Comment Date	Round 4 Comment	Round 4 Response	Status
6	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Sec 4.1- Matthews Creek Restoration and Enhancement	Fish & Fish Habitat	Which measures will be in place to that the compensation site will be protected from future degradation in the long term regardless of ownership (i.e land covenants)? What measures will be in place so that FN can hunt and fish on the compensation site?	Since receipt of this comment, there have been meetings with VRB and with representatives, their consultants (including the reviewer), BW Gold, and Palmer on this matter. BW Gold has expressed its interests in the private property and has faced in more detail from LDRR and LDRN in regards to their interest in long-term protection of this land (e.g., giving the land to a non-profit). BW Gold will be preparing a document setting out its position on the private property for discussion with LDN and LDN. As part of those discussions, BW Gold requests specific information from the Nations on how they would like to use the private property in this will assist in the evaluation of potential avenues that respect the interests of all parties. BW Gold is committed to continuing these discussions and proposes further discussion in the EMB forum.	No update for this version (April 2022).	4/25/2025	Is there a timeline that we can shoot for to review the "document setting out its position on the private property for discussion with LDN and LDN"?	Discussions on securement of the private land are ongoing on regular meetings, including the EMB and fisheries technical meetings. BW Gold provided a land securement letter on November 22, 2021 laying out BW Gold's approach on land securement. As noted in the memo, BW Gold is interested in exploring potential uses of the property provided they also align with BW Gold's interests too. The land securement letter was provided to the Nations on November 22, 2021 and LDN provided that the potential uses are compatible with BW Gold's interests and uses. BW Gold requires information to better understand the Nations' vision for use of the property. This information would allow BW Gold, along with LDN and LDN, to explore potential uses of the property provided they also align with BW Gold's interests too.	06-Jul-22	The issue of land ownership and long-term use plan with the Nations has not yet been resolved. As noted in the memo, BW Gold's interested in exploring potential uses.	As noted in the previous comment response (comment #5, December 2, 2021), BW Gold provided a letter on November 22, 2021 setting out BW Gold's approach generally on land securement. As noted in the memo, BW Gold is interested in exploring potential uses of the property with LDN and LDFN provided that the potential uses are compatible with BW Gold's interests and uses. BW Gold requires information to better understand the Nations' vision for use of the property. This information would allow BW Gold, along with LDN and LDN, to explore potential uses of the property provided they also align with BW Gold's interests too. The land securement letter was provided to the Nations on November 22, 2021 laying out BW Gold's approach on land securement. As noted in the memo, BW Gold is interested in exploring potential uses of the property with LDN and LDFN provided that the potential uses are compatible with BW Gold's interests and uses. BW Gold requires information to better understand the Nations' vision for use of the property. This information would allow BW Gold, along with LDN and LDN, to explore potential uses of the property provided they also align with BW Gold's interests too.	Dec 2022	The issue of land ownership and long-term use plan with the Nations has not yet been resolved. As noted in the previous comment response (comment #5, December 2, 2021), BW Gold provided a letter on November 22, 2021 setting out BW Gold's approach generally on land securement. As noted in the memo, BW Gold is interested in exploring potential uses of the property with LDN and LDFN provided that the potential uses are compatible with BW Gold's interests and uses. BW Gold requires information to better understand the Nations' vision for use of the property. This information would allow BW Gold, along with LDN and LDN, to explore potential uses of the property provided they also align with BW Gold's interests too. The land securement letter was provided to the Nations on November 22, 2021 laying out BW Gold's approach on land securement. As noted in the memo, BW Gold is interested in exploring potential uses of the property with LDN and LDFN provided that the potential uses are compatible with BW Gold's interests and uses. BW Gold requires information to better understand the Nations' vision for use of the property. This information would allow BW Gold, along with LDN and LDN, to explore potential uses of the property provided they also align with BW Gold's interests too.	Open
7	21-May-25	Indigenous Communities	Section 35(2) authorization and the Schedule 2 amendment of the MMER	Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Sec 3.2.3 Evaluation of Future Conditions	Fish & Fish Habitat	Please provide the HEP calculations per the compensation site as per the methodology Appendix A. This includes existing conditions and HEP multipliers used to derive "predicted" habitat units for compensation measures. Please also refer to DFO's Practitioners Guide to HEP methods (Hoan and a final output in Table 6-2. Please provide the documentation required to reproduce outputs.	See requested information has been provided (October 2021), and requested into this document (Appendix C). BW Gold is happy to answer any questions on these data and meet with the reviewers for a technical session to do so. Also if there are any data that the reviewer needs that is missing or omitted, please do not hesitate to reach out directly to BW Gold.	N/A	2/15/2021	Abbreviation key also is useful. Could you please break out the definition. for the codes for the Bank issues (ex. BI1, BI2, BI3, BI4 Issues), Bank Treatments and Bed Treatments.?	See abbreviated descriptions for Bank Issues, Bank Treatments, and Bed Treatments are provided in the Matthews Creek Ranch Design.xlsx spreadsheet that was provided in the requested information has been provided (October 2021). Additional information is also provided in the design drawings, included in Appendix C of the Compensation Plan submission package.	30-Jun-22	The HEP data needs to be presented within the report (or as a digital attachment to the report) in a format that is easily reviewed (i.e., not as a PDF of a series of HEP calculation segments) and tabular to stream segments spatially.	This response is similar to DFO 39 B for which is detailed HEP data table was created. This table has been added as a new Appendix H to the FHCP.	Oct. 2022	This response is similar to DFO 39 B for which is detailed HEP data table was created. This table has been added as a new Appendix H to the FHCP. Summary tables have been provided for areas in the new/biology footprint within the KIO-FHCP Information Request #9 Memorandum dated September 9, 2022 however there is no explanation as to how the HEP was applied to the footprint areas. Please provide more detail on how it was done and how it was QA'd but none of the actual data is provided within the report except a final summary. Additionally, it is unclear how much of the work was "ground truthed" and how much of the work was done using aerial photo interpretation. There is talk of some comparison between conditions over the years but that data is not presented either.	The requested information is now in Appendix H of the Information Request #9 Memorandum that has been re-submitted.	Open
8	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Sec 4.3- Riparian Habitat Area	Fish & Fish Habitat	Please provide spatial representation of land that BW Gold owns (fee-simple) along the section of Matthews Creek to be restored and enhanced, and the portions of the compensation habitat can located on the adjacent Crown Land. Please provide the GIS and summary tables showing: all numbers/assumptions/calculations for deriving the total area of the proposed riparian restoration along Matthews Creek. Please provide aerial imagery, prepared over May/shrub-cluster polygons, increment works site locations/prescriptions in spatial format (or spatial files with associated data in format that can be fed to spatial files).	See requested information has been provided (October 2021), and spatial data incorporated into this document (Appendix C). BW Gold is happy to answer any questions on these data and meet with the reviewers for a technical session to do so. Also if there are any data that the reviewer needs that is missing or omitted, please do not hesitate to reach out directly to BW Gold.	N/A								Closed		Closed
9	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Sec.7- Habitat Balance	Fish & Fish Habitat	Please detail local fisheries management objectives and local restoration priorities with references.	Indigenous Nations feedback or fisheries management objectives and restoration priorities have been incorporated as detailed Section 1.6 Consultation. This feedback has been combined with federal fisheries management policies that form the basis of the compensation strategy as detailed in Section 4 Compensation Measures.	Section 1.6				30-Jun-22	Portions to comment # date may 25, 2021- A summary of local fisheries management objectives and local restoration priorities is not provided in the report.	The compensation strategy as detailed in Section 4 Compensation Measures is the summary of Indigenous Nations feedback on fisheries management objectives and restoration priorities that were context-forward after considering Federal fisheries management policies, habitat feasibility, ecological connectivity, and habitat offsetting ratios, as detailed in Section 4 Compensation Measures.		Closed		Closed
10	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	4.1 Matthews Creek Restoration and Enhancement	Fish & Fish Habitat	A livestock management plan is one of the most important restorative actions as it addresses the key underlying driver of the degradation at the site. Offsetting plan must specify cattle management plan as part of the compensation plan.	As discussed in Section 4.4.5, BW Gold (and the previous owners, New Gold) have excluded cattle from the property and engaged in discussions with provincial range officers to explore options for permanent cattle exclusion. Therefore, a livestock management plan is not included. As discussed at recent meetings among the parties, the area will be protected because the land is either privately owned by Artemis (ex., Artemis has indicated use), or it is crown land on which FLNRORD have placed a Notice of Interest (NoI) - May application with the goal of preventing ranching / cattle grazing. Please also see response to comment #6.	Section 4.4.5	12/2/2021	Artemis can only control use if they still own the land. If Artemis goes bankrupt and/or the land is sold all bets are off. This fits well into the need for a land covenant on any LNDRN ID #1.	Discussions on securement of the private land are ongoing.	06-Jul-22	Discussions on securement of the private land are ongoing. Noted. This discussion is ongoing in regularly scheduled fisheries technical meetings and EMB meetings.	Oct. 2022	Noted. This discussion is ongoing in regularly scheduled fisheries technical meetings and EMB meetings. These discussions have not occurred at EMB meetings, and haven't been discussed at fisheries meeting in months. Please provide an update to where this has landed.	Please refer to response to #3. Additionally, the action item from both EMB and fisheries meetings for LDN and LDFN to provide a document on the desired long-term uses for Matthews Creek has not yet been received.	Open
11	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	A brewse protection plan for riparian rehab sites should be included. (ex. Risk of ungulate damage could be reduced with cattle exclusion fencing and spraying of bread-based products on planting/cuttings. Coating of riparian plantings with mix of bree-paint and sand can reduce risk of browse from beavers.)	As the majority of the plantings are shrubs, it is less likely that they will be browsed by ungulates, or by beavers for foraging or building. We propose to have as part of the Post-Construction Effectiveness Monitoring Plan, and if browse is found to be an issue, identifying specific mitigation measures. E. The Effectiveness Monitoring Plan (Appendix E) has been updated to include browse monitoring.	Appendix E, Sections 2.1, 2.2, 3.1.1, 3.2.1	12/2/2021	Ungulates and beaver definitely browse young shrubs. If monitoring shows everthing is eaten it will be too late. A bread spray product and a latex paint/sand coatings are two effective measures that can help manage this risks.	Plant damage or mortality from animal browse is likely to occur to some degree. Plant establishment success will be evaluated as described in the effectiveness monitoring plan, inclusive of browse or other sources of plant damage. Consideration of these mitigation measures will be added to the adaptive management plan, although chemical treatment of plants is not a preferred approach.	06-Jul-22	A brewse protection plan for riparian rehab sites should be included in the compensation plan (please see chart comment).	Since the proposed chemical treatment options for plants is not a preferred approach to prevent plant damage or mortality from animal browse, the currently planned monitoring approach in the effectiveness management plan is the path forward for this project. If more than 5% of planted riparian vegetation is affected by wildlife browse after first year, non-chemical (e.g., fencing) mitigation measures will be used to manage the issue. Refer to DFO 39 Land Management Handbook be used?	Oct. 2022	Since the proposed chemical treatment options for plants is not a preferred approach to prevent plant damage or mortality from animal browse, the currently planned monitoring approach in the effectiveness management plan is the path forward for this project. If more than 5% of planted riparian vegetation is affected by wildlife browse after first year, non-chemical (e.g., fencing) mitigation measures will be used to manage the issue. Refer to DFO 39 Land Management Handbook be used?	Recommendations for blood bored plant product use to prevent animal browse will be addressed in the separate vegetation planting plan that will be submitted to the Nations for review. Primer, Ecology, and BW Gold are unfamiliar with the use of blood-based products to prevent animal browse and have some concerns about the possibility of it actually being an attractant for bears. If monitoring demonstrates browse to be an issue, deterrents such as use of these products will be explored.	Open
12	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	Sprinkler irrigation system set up (preferably automated) for the first few years to ensure the beach layers and riparian plantings survive and flourish. Hand watering is an extra step that is ineffective and time consuming. Obtaining a water license for this will be required if not already in place.	The area to cover and effectively water in a major undertaking. Given the location of the plantings (mostly riparian) we can expect some seasonal flooding and periods of high flow. However, we agree there is risk to the plantings in the first few years and to address this issue we will propose a drought water plan that will lay out mitigations in the event of drought. The plan may include mitigations such as planting plant-native bins/plant species that are drought tolerant, and watering frequencies (e.g. if no precipitation over all of Sept, plants will be watered).	Appendix E, Sections 2.1, 2.2, 3.1.1, 3.2.1	12/2/2021	Hand watering is not effective unless you do it everyday and how an only to help you. A doesn't work very well. I wish it did. We have been through this on other sites and moved to at least semi-automated irrigation (ie. Trash pumps, irrigation lines and high-volume sprinklers). Is there a timeline for an irrigation plan to be included in the document?	Riparian plant survivorship will be monitored and adaptive management (e.g., watering, replanting) will be employed if success criteria are not met.	06-Jul-22	Sprinkler irrigation system set up (preferably automated) for the first few years to ensure the beach layers and riparian plantings survive and flourish. Hand watering is an extra step that is ineffective and time consuming. Obtaining a water license for this will be required if not already in place.	The HEP (Appendix E) Section 3 Adaptive Management and Reporting states "If precipitation monitoring indicates drought conditions are occurring, riparian vegetation watering may be implemented." The planting plan is under development, following field surveys completed in summer 2022. This planting plan will include recommendations for watering if needed. The plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	Oct. 2022	The HEP (Appendix E) Section 3 Adaptive Management and Reporting states "If precipitation monitoring indicates drought conditions are occurring, riparian vegetation watering may be implemented." The planting plan is under development, following field surveys completed in summer 2022. This planting plan will include recommendations for watering if needed. The plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	Recommendations for watering will be addressed in the separate vegetation planting plan that will be submitted to the Nations for review.	Open
13	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	Drawing 14 - Planting Notes: Spacing of "clusters of 6 shrubs planted 1m apart" with 12m between clusters is very very sparse. Please provide target percent shrub cover and content description to detail coverage objectives. My rough calculations: result in less than 30% cover. Please provide reference condition of "healthy" riparian area plots with percent cover so these values can be used as target objectives for riparian compensation works.	The reference meshes have approximately 60% woody vegetation cover. The approach with the restoration clusters is for the vegetation to establish and expand to a similar 60% woody vegetation cover. It is estimated that the proposed plantings will achieve the 60% cover goal within the 10-year monitoring period.	Appendix C	2/15/2021	Please provide data from the reference reaches. This does not tie up with the HEP outputs. Please provide a diagram to show how the planting plan will result in the woody veg cover predicted in the HEP calculations.	Detailed baseline and reference site information was obtained during a summer 2022 vegetation assessment. Data will be presented in upcoming annual reports and incorporated into the planting plan and effectiveness monitoring plan reports for the compensation sites.	06-Jul-22	Detailed baseline and reference site information was obtained during a summer 2022 assessment. These data will be presented in upcoming annual reports and incorporated into the planting plan and effectiveness monitoring plan reports for the compensation sites.	Oct. 2022	Detailed baseline and reference site information was obtained during a summer 2022 assessment. These data will be presented in upcoming annual reports and incorporated into the planting plan and effectiveness monitoring plan reports for the compensation sites.	Including baseline and reference site information is not an acceptable option. This plan cannot be considered complete without this information included.	Open
14	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	Drawing 14 - Horizon seems to indicate prescriptions for 800 plants and 600 saplings. This does not add up to the riparian area compensation works reported as 45,000m2. Assuming each plant or cutting were side by side (extreme example) and have total of full growth coverage this would be 1300m2 or 3% of 45,000m2. Please break-out expected amount of objective riparian percent cover for shrub/tree/grass and show accounting used.	The riparian area compensation works area was calculated using 100% green up over a period of 10 years (i.e., end of monitoring program), based on the area coverage of initial plantings in Year 0 combined with the natural propagation of the reclamation plantings.	Appendix E	2/15/2021	this does not address the information request. Please re-address. The site is already "green". Seeding grass over top of grass will not result in a meaningful improvement. If riparian conditions and as we saw with the spoiler berm/access road, the existing vegetation will outcompete planting plan will not meaningfully improve riparian habitat either.	Sowings refers to the growth of planted vegetation over a set span of time and the amount of coverage expected beyond baseline conditions. Data obtained from a Summer 2022 vegetation assessment will inform the final vegetation types and numbers required for the planting plan.	06-Jul-22	Since obtained from a Summer 2022 vegetation assessment is necessary to inform the final vegetation types and numbers required for the planting plan.	Oct. 2022	Detailed baseline and reference site information was obtained during a Summer 2022 vegetation assessment. These data will be incorporated into the planting plan regarding final vegetation types and numbers required. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	The planting plan is a major component of the compensation plan. For this reason, the compensation plan cannot be considered acceptable to provide guidance for how impacts elsewhere will be compensated for (let alone reviewed) without this information included.	Open
15	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	7.2 Objectives	Fish & Fish Habitat	Section 1.a. Objectives. 3-year monitoring plan is too short. Timeline should be more like 30, 20 or 10 years because we are looking at permanent impacts just over the ridge. Detailed sampling can be conducted at intervals other than annually but there should be a plan to see that objectives are achieved in the long term.	We agree with the reviewer's comment. Effectiveness monitoring of the vicinnem compensation works site is proposed for 10 years. The text in section 5.2 will be revised to propose monitoring of the plantings throughout that 10-year period as well. It is expected that the works will have stabilized by 10 years following construction. It is expected that if the works are not stable, or are showing signs of failing, that the monitoring will continue beyond this period. long-term monitoring (>10 years). Additionally, BW Gold has committed to including long term monitoring in EAC Condition 17 - Aboriginal Group Monitor and Monitoring Plan, the terms of reference of which will be consulted on with Indigenous Nations for review.	Changed in Appendix K - MMER&R Schedule 2 Fisheries Compensation Habitat Effectiveness Monitoring Plan										Closed
16	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	4.1.2 Success Criteria. Percent cover of riparian vegetation is a much better metric of success than survival as this is the actual objective of the works. Plant mortality is often high but percent cover can be adequate to meet objectives if those objectives are stated a the beginning. Consider revising details of percent cover to include numbers rather than just "an increase" (ie. 1% to 3% in 3 years cannot be considered successful).	We agree with the reviewer's comment. Effectiveness monitoring of the vicinnem compensation works site is proposed for 10 years. The text in section 5.2 will be revised to propose monitoring of the plantings throughout that 10-year period as well. It is expected that the works will have stabilized by 10 years following construction. It is expected that if the works are not stable, or are showing signs of failing, that the monitoring will continue beyond this period. long-term monitoring (>10 years). Additionally, BW Gold has committed to including long term monitoring in EAC Condition 17 - Aboriginal Group Monitor and Monitoring Plan, the terms of reference of which will be consulted on with Indigenous Nations for review.	Changed in Appendix K - MMER&R Schedule 2 Fisheries Compensation Habitat Effectiveness Monitoring Plan				30-Jun-22	Portions to comment ID 11 dated may 25, 2021. Please explicitly state within the report the percent cover of riparian cover by structural stage that will be used to measure success.	The EMP (Appendix K) Table 3-1 indicates the riparian vegetation cover success metric is an increase of 5-30% between monitoring years. Structural stage has not been included as a metric.	Oct. 2022	The EMP (Appendix K) Table 3-1 indicates the riparian vegetation cover success metric is an increase of 5-30% between monitoring years. Structural stage has not been included as a metric.	Riparian revisitation is a key part of the overall plan to compensate for impacts due to the clear structural layer is an important part of describing vegetation. Saying that a 5 - 30 % increase in "percent cover" is a measure of success is not adequate. If we look at a riparian area currently comprised of agronomic grasses the percent cover may be 90 or 100%. We cannot describe that as successful if the percent cover is 95% after construction. Please provide more detail on layers and rule layers (ex. tall shrub layer, low shrub layer, herb layer etc.) Suggest using standardized procedures and documenting as per the Land Management Handbook 25. https://www.for.gov.bc.ca/hfd/pubs/Docs/HAN/HAN25/LHB_HAN_25MB.pdf . This needs to be in the methods.	We suggested, the success criteria for riparian cover revitalization for reevouing change in structure over time will be disrupted to the standardized procedures and documenting as per the Land Management Handbook.	Open
17	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	Consider using standardized benchtarks/metric or baselines for in-stream and Off-Channel Habitat Effectiveness Evaluation http://www.env.gov.bc.ca/wld/documents/fish_docs/bm_guidelines.pdf	Noted. Standardized items will be used for effectiveness monitoring at all compensation sites. Added to Section 2.1 Monitoring Approach of Appendix E.	Appendix E - Section 2.1	5/21/2021	Ok. Can we provide drafts of the templates within this document? Suggest including all the templates in an appendix. Also suggest including the HEP input spreadsheets so we can measure that we can compare the "existing" conditions to the "restored conditions"	Since effectiveness monitoring criteria and metrics have been established and accepted by reviewers and regulators, a standardized field form will be developed and shared for review. Re evaluation of the HEP results will be conducted as a parallel investigation to the effectiveness monitoring plan. As previously discussed, HEP is a predictive tool and not appropriate for long-term monitoring, so it will not be directly incorporated into the effectiveness monitoring plan.	30-Jun-22	Please draw within the report that a standardized field form will be developed and shared for review before effectiveness monitoring is conducted. Please include HEP re-evaluation as part of the monitoring program in Year 10 including field data collection templates. (Items that can be populated digitally in the field as well as printed).	A statement on standardized forms being used for effectiveness monitoring at all compensation sites has been added to Section 4 Adaptive Management and Reporting. BW Gold is committed to developing a data-sharing portal and a protocol for information-sharing such that baseline an post-construction monitoring data can be accessed by Indigenous groups and regulators. BW Gold is currently in discussion regarding the best approach for establishing this information sharing system. Further directions will be provided prior to Construction. Re-evaluation of the HEP results in year 10 has been added to Section 4 Adaptive Management and Reporting.	Oct. 2022	A statement on standardized forms being used for effectiveness monitoring at all compensation sites has been added to Section 4 Adaptive Management and Reporting. BW Gold is committed to developing a data-sharing portal and a protocol for information-sharing such that baseline an post-construction monitoring data can be accessed by Indigenous groups and regulators. BW Gold is currently in discussion regarding the best approach for establishing this information sharing system. Further directions will be provided prior to Construction. Re-evaluation of the HEP results in year 10 has been added to Section 4 Adaptive Management and Reporting.	We would like to review the field form templates before the program begins. Once the data is collected, it is too late to change the data that is collected. Additionally, we do not understand what is happening. Just one example of this is plant surveywhip. A common mistake is to not map each plant installed during baseline monitoring. When this happens, in subsequent years it becomes impossible to tell what is survivorship and what is a result of natural recruitment/die off. When throwing a plot each plant can be mapped based on its azimuth and distance from the centre with the centre marked with a metallic pain (so it can be found with a metal detector post. Since are the types of details that can be harmonized in a standard field form. Please provide a draft field form for review. Additionally, we are confounded by natural recruitment and difficulty discovering pre-existing plant death and death of planted stock." Let's spare ourselves the pain and just make the work plan detailed with templates for data collection. Same goes for the HEP. Just include them please.	Field form templates will be included in the separate vegetation planting plan that will be submitted to the Nations for review.	Open
18	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	4.4 - Acquisition, analysis and preservation of high-resolution imagery should be part of the effectiveness monitoring program.	High resolution imagery will be contested using drones for monitoring restoration effectiveness as detailed in the Fish Habitat Offsetting Plan (Section 10.3.3.1). Use of ground-level photographs and aerial drone imagery will be added to the Fish Habitat Compensation Plan to assist in long-term tracking of the constructed habitat conditions, including changes in % cover. Added to Section 4.3.2.3 Desktop- and Field-based Assessments of Habitat, and to Appendix E (Section 2.1 Monitoring Approach).	Added to Section 4.3.2.3 and Appendix E - MMER Schedule 2 Fisheries Compensation Habitat Effectiveness Monitoring Plan				30-Jun-22	Portions to comment ID 13 dated may 25, 2021- Text in report should be clarified to state that drone surveys and stitching of orthoimagery for the entire restoration site will be conducted immediately following completion and during each subsequent year of the monitoring program and this data will be presented within the report and identified as a digital attachment. Text is currently ambiguous.	Text in MMP (Appendix I) Section 4.1 Monitoring Approach has been revised to match the suggested text.		Closed		Closed
19	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	Table 3-2 Success Criteria for Matthews Creek Off-channel Ponds: Physical stability/water depth and flow – "max velocity will provide habitat for fish during periods where ice cover is present" should be defined as m/s of ice free overwintering habitat as this is the stated objective of the ponds.	The metric added to Table 3-2 of Appendix E of the Fish Habitat Compensation Plan in addition to water depths and through-flow that will provide habitat for fish during periods where ice cover is present (measured as maximum under-ice water depth).	Added to Table 3-2 of Appendix E - MMER Schedule 2 Fisheries Compensation Habitat Effectiveness Monitoring Plan				30-Jun-22	Portions to comment ID 14 dated may 25, 2021- Please provide specific numeric ones (m/s) and methodology for determining estimates of this area for what is considered successful for useable area of the ponds during winter months.	The requested specific numeric ares required for under ice habitat availability has not been added to Table 3-2 of Appendix E of the Fish Habitat Compensation Plan because of the variable pond sizes and winter conditions. The method for determining the success criteria is the maximum under-ice water depth, as indicated in Table 3-2. This depth for each pond will provide sufficient information to determine whether there is useable overwintering habitat that is connected to the main channel, along with surveys for fish presence.	Oct. 2022	The requested specific numeric ares required for under ice habitat availability has not been added to Table 3-2 of Appendix E of the Fish Habitat Compensation Plan because of the variable pond sizes and winter conditions. The method for determining the success criteria is the maximum under-ice water depth, as indicated in Table 3-2. This depth for each pond will provide sufficient information to determine whether there is useable overwintering habitat that is connected to the main channel, along with surveys for fish presence. "Measurement" is not specific enough of a method. How will it be measured? Will the pond be divided into 4 quadrants and a hole drilled through the center of each quadrant then a metal bahsi ion they called Eggtech) used to detect where water is hit lowered to the water surface? Will the pond be divided into 4 quadrants and a hole drilled through the center of each quadrant then it can be measured and then the distance from the ice to the water subtracted to get the depth? Is it measurable to say that the pond must have 1m of water-w/shown over the area between those quadrant centres (2m2. 3m2)? This project is intended to offset impacts for the loss of overwintering habitat so if we don't specify clearly how we are going to measure the area of overwintering habitat gained how do we know if it was successful?	Maximum under-ice water depth will be measured using a series of holes cut in the ice and a weighted line used to measure the distance from the bottom surface of the ice to the substrate. An average ordinary-depth of at least 1 m can be used as the minimum limit for overwintering. These depth measurements for each pond will provide sufficient information to determine whether there is useable overwintering habitat that is connected to the main channel, along with surveys for fish presence. The same holes in the ice will be used for deploying the underwater camera for identification of fish presence/absence.	Open
20	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	Table 3-2 Success Criteria for Matthews Creek Off-channel Ponds: Water quality and Cost Estimates	Noted. The planting specifications, including invasive planting densities will be confirmed following completion of the upcoming detailed vegetation survey. Cost estimates will be revised once accurate quantities are available, including correcting the error that will be corrected in Table-Detail 8A.	Appendix F - Table-Detail 8A											
21	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix F – Offsetting Plan Quantity and Cost Estimates	Fish & Fish Habitat	Areas of sites and # of plants – Is there a mistake in the cost estimates where the number of plants is an order of magnitude too low? It says 45ksite%/5000 section but "Assumptions" footnotes below each cost estimate indicates 4plants/linear m which would be 400plants/100 linear m section.	Noted. The planting specifications, including invasive planting densities will be confirmed following completion of the upcoming detailed vegetation survey. Cost estimates will be revised once accurate quantities are available, including correcting the error that will be corrected in Table-Detail 8A.	Appendix F - Table-Detail 8A											
22	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix F – Offsetting Plan Quantity and Cost Estimates	Fish & Fish Habitat	"Native Earth Fill" for brush layers and "topsoil" should have minimum specifications (i.e. organics, silt, sand, clay, pH, nutrients composition – tested at a lab) to ensure that it is suitable to support growth of brush layers and riparian plants. This is a common cause of plant mortality and is often overlooked as being important because it can be a huge hassle during construction.	Organic topsoil will be stripped and salvaged within the limits of excavation areas, for later use in association with restoration and seeding of disturbed areas and construction of additional habitat. Organic topsoils will be identified for use by a qualified solls QP and vegetation growth will be monitored.	Section 2.1.3.2 Operations											
23	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Blackwater Gold Project Fish Habitat Compensation Plan	Appendix E - Effectiveness Monitoring Plan	Fish & Fish Habitat	How has beaver activity been historically managed at the ranch and how will it be managed in the long term maintenance of this site if it becomes dam-free? Are there were numerous beaver dams present during baseline assessments it would be expected that there will be more in the future. This might result in significant areas of flooding which is unlikely to be a bad thing in terms of fish habitat naturally-involving conditions somewhat similar to the physical works prepared (digging of ponds).	As indicated in Section 4.3.3 of the Fish Compensation Plan, the low-gradient and least abundance of beaver dams. Historic flow velocities and maintain a deep channel dominated by run and pool habitats during all seasons. This observation indicates beaver activity has not been actively managed on the stretch. Given the benefits for fish populations (e.g. summer low flow and overwintering habitat), increased stream productivity beaver management is not planned for this compensation site. However, if effectiveness monitoring identifies beaver activity has created persistent conditions that prohibit fish passage or access to ponds, adaptive management will be implemented to re-instate fish access. The current efforts are designed to complement expected beaver activity.	Added to Appendix E - MMER Schedule 2 Fisheries Compensation Habitat Effectiveness Monitoring Plan				30-Jun-22	There needs to be a strategy for the site that recognizes that this value of beaver reappropriation of the area is a good thing and may have benefits to the site for fisheries and the wetland as a whole. Has there been any of the work planned there with machines and plantings, or has beaver activity been monitored in the past?	See response #10 (above as part of round 1 comments) regarding beaver activity. As per Section 4.3.3 Matthews Creek Existing Conditions, beaver dams minimize flow velocities and maintain deep channels dominated by run and pool habitats during all seasons. Due to these benefits for fish populations (e.g., buffering summer low-flow, enhancing overwintering habitat), increasing stream productivity, beaver management is not planned for this compensation site. As per the EMP (Appendix K, Section 3.3.1 and 4), if fish passage or access to compensation ponds is impeded due to beaver activity, adaptive management will be implemented to re-instate passage (e.g., fish ladder, pond leveler).	Oct. 2022	See response #10 (above as part of round 1 comments) regarding beaver activity. As per Section 4.3.3 Matthews Creek Existing Conditions, beaver dams minimize flow velocities and maintain deep channels dominated by run and pool habitats during all seasons. Due to these benefits for fish populations (e.g., buffering summer low-flow, enhancing overwintering habitat), increasing stream productivity, beaver management is not planned for this compensation site. As per the EMP (Appendix K, Section 3.3.1 and 4), if fish passage or access to compensation ponds is impeded due to beaver activity, adaptive management will be implemented to re-instate passage (e.g., fish ladder, pond leveler).	Information on existing and planned soils, and clarit associated with moving and amending soil for planting areas will be included in the separate vegetation planting plan that will be submitted to the Nations for review.	Open
24	21-May-25	Indigenous Communities		Al Irvine (New Graph)	Appendix A 5.1.2 AC - Fisheries Mitigation and Offsetting Plan.pdf	Annex D: Summary of Regulatory Consultations for Fisheries Mitigation and Offset Planning	Fish & Fish Habitat	Why was there no engagement with FN including Nalkr Tachlo Watershed Restoration Program and Nechako Fisheries Conservation Program in regulatory consultations documented in the Annex?	BW Gold notes that the review comments are on a conceptual Fisheries Mitigation and Offsetting Plan (the Plan) dated 2014 which is no longer current. The Plan pre-dates BW Gold's ownership of the Project and was developed based on assumptions and information that is no longer relevant or achievable. BW Gold notes that the 2014 Plan was part of the EA documentation and as such can make the general assumption that the plan and its contents (including the Annex) were consulted upon during the EA. The current MMER plan and FHA plan include updated records of the consultation activities that BW Gold conducted in preparation of the offset plans.	N/A					30-Jun-22	For this project there is a lack of meaningful engagement and inclusion of First Nations within the Plan (the Plan) dated 2014 which is no longer current. The Plan pre-dates BW Gold's ownership of the Project and was developed based on assumptions and information that is no longer relevant or achievable. BW Gold notes that the 2014 Plan was part of the EA documentation and as such can make the general assumption that the plan and its contents (including the Annex) were consulted upon during the EA. The current MMER plan and FHA plan include updated records of the consultation activities that BW Gold conducted in preparation of the offset plans.	See response #68 (above as part of round 1 comments) regarding First Nations engagement. This review comment applies to the 2014 conceptual Fisheries Mitigation and Offsetting Plan (2014 Plan) that pre-dates BW Gold's ownership of the project. As part of the EA documentation and as such, it is assumed that the plan and its contents were consulted upon during the EA. As per Section 7.1, the offsetting planning process is iterative, along with assessment of project designs and ongoing input with First Nations though effective consultation. Meetings with First Nations were initiated in 2013 and are ongoing. The current MMER plan includes updated records of consultation activities in preparation of the offset plans, including a summary of engagement activities with local Indigenous groups to a varying degree, including field reconnaissance visits, community meetings, and technical workshops between 2016 and 2022. Seven meetings have led to updates to the FHCP. A summary of the meeting dates and attendees is provided in Table 6-2.	Oct. 2022	Hopefully we will see meaningful enrichments from the proponent for indigenous led watershed restoration plans so in the future there will be a more meaningful role for Nations in deciding where investments are best directed.	BW Gold is committed to continued engagement with the Nations on watershed restoration planning, for example BW Gold is working with a local land owner for a large-scale fish and wetland conservation and restoration program at the Dykstra ranch. BW Gold presented this program at an EMB meeting

Blackwater | Schedule 2 - Fish Habitat Compensation Plan (FP)

Review Comments																			
ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Comment Theme	Comment	Response	Consolidated with EIS/IS Fish Habitat Compensation Plan	Round 2 Comment Date	Round 2 Comment	Round 2 Response	Round 3 Comment Date	Round 3 Comment	Round 3 Response	Round 4 Comment Date	Round 4 Comment	Round 4 Response	Status
42	2022-September-29			Yoan Brousseau (Kandev)	Fish Habitat Compensation Plan	6.4.1- Mistliewa Creek Restoration and Enhancement, page 60	Revegetation	no mention of treatment of invasive species here, this is likely an important activity, very mention of invasive species treatment is in Appendix D ESMP, should be noted here and suggested how it will be accomplished	Noted. Sections 6.4.1 was revised to include identification of existing invasive species and this information will be added as part of monitoring data collection and management recommendations. Management of invasives added to Section 9 Monitoring and Adaptive Management.	Added to Table 6-6 and Section 6.10 Monitoring and Adaptive Management.	July 6 2022			In this plan phase reference specific sections of the ESMP and/or IPMP that refer to maintaining and management of invasive plant species		Section 4 of Appendix G Construction Environmental Management Plan has been cited for invasive plant species management in Section 6.4.1 Mistiwa Creek Restoration and Enhancement, and in Section 6.10 Monitoring and Adaptive Management.				Closed
43	2022-September-29			Yoan Brousseau (Kandev)	Fish Habitat Compensation Plan	6.4.1- Mistliewa Creek Restoration and Enhancement, Table 6-1	Revegetation	table does not suggest seeding which is mentioned on page 64, this should be noted here as well	Noted. Table 6-1 was updated.	Table 6-1, Appendix G (2022 Vegetation Workplan) added.										Closed
44	2022-September-29			Yoan Brousseau (Kandev)	Fish Habitat Compensation Plan	6.4.1- Mistliewa Creek Restoration and Enhancement, pages 65 and 66	Revegetation	selected species should be provided for review in an appendix	The plant list can be found in Appendix C (Detailed Design Drawings), on drawing number 14 (sheet 14 of 17, it's page 156 of the pdf). This appendix has been cited in the text in Section 6.4.1. A cite has been added to Section 6.4.1 to direct readers to Appendix C. Appendix C includes a description of existing plant communities and proposed ground preparations, planting locations, species, and densities.	Cited in Section 6.4.1. Appendix G (2022 Vegetation Workplan) added.										Closed
45	2022-September-29			Yoan Brousseau (Kandev)	Fish Habitat Compensation Plan	6.4.1- Mistliewa Creek Restoration and Enhancement,	Revegetation	not clear where direct seeding will take place, should clearly outline criteria of sites that will receive direct seeding	Added to Table 6-1 and Appendix G (2022 Vegetation Workplan) added.	Added to Table 6-1 and Appendix G (2022 Vegetation Workplan) added.	July 6 2022			section 6.4.1 only highlights that seeding will take place based on vegetation survey that are being conducted in 2022. Please clarify where seeding will take place (e.g., only in the exposed channel banks (other planting is scheduled to occur in other areas), rather than all areas of disturbance as per BHN public response to our comment. Please clarify and confirm in the table precisley where seeding will take place	Oct. 2022	As stated in or Section 6.4.1 Mistiwa Creek Restoration, the final riparian planting prescriptions (e.g., plant selection, planting densities, seeding techniques and rates, and seeding mixes) will be based on vegetation surveys performed during the 2022 field season, as well as the availability of plants/seeds, and site conditions during implementation (i.e., there will be some degree of 'field-fitting'). Table 6-1 currently states natural riparian vegetation will be planted via seeding and live stakes (Appendix C Holdstot Offsetting Detailed Design Drawings) in all areas of disturbance. The planting plan containing final riparian planting prescriptions is under development, following field surveys completed in Summer 2022. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	We need to review the updated maps before we can be comfortable closing this comment and fully understand exactly where seeding will be taking place.	updated maps showing seeding locations will be included in the separate vegetation planting plan that will be submitted to the Nations for review.		Closed
46					Fish Habitat Compensation Plan	6.4.2- Mistliewa Creek Restoration and Enhancement, Table 6-1	Revegetation	shrub layers are mentioned here and many other places in document but species composition of these is not provided, also species for live staking not provided, please provide this information	Plant species list is provided in the drawings. This information has been cited in Table 6-1 and Section 6.4.1.	Cited in Section 6.4.1 and Table 6-1. Appendix G (2022 Vegetation Workplan) added.										Closed
47					Fish Habitat Compensation Plan	6.4.2- Mistliewa Creek Off-Channel Ponds	Revegetation	mentions riparian plantings but not pond emergent vegetation plantings, the species and procedure for establishing emergent vegetation should be detailed	This information is provided in the drawing notes, please refer to drawing number 17 in Appendix C. Now cited in the text (6.4.2).	Cited in Section 6.4.2. Appendix G (2022 Vegetation Workplan) added.										Closed
48	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 121 - Lot 5 Detail Site Plan	Revegetation	We coloured polygons for revegetation efforts do not overlap - is this how they will be implemented? E.g., will shrub planting areas being seeded as well?	Shrubs planting areas will be seeded as well (Table 6-1).	Table 6-1, Appendix G (2022 Vegetation Workplan) added.	July 6 2022	Please clarify and update the maps. Currently, the maps read that shrub planting and seeding will occur in separate locations and do not overlap. Table 6-1 highlights that shrub planting and seeding will only take place of exposed channel bank; however the maps do not reflect this.	Oct. 2022	Table 6-1 currently states natural riparian vegetation will be planted via seeding and live stakes (Appendix C Holdstot Offsetting Detailed Design Drawings) in all areas of disturbance. The final riparian planting prescriptions (e.g., plant selection, planting densities, seeding techniques and rates, and seeding mixes) will be based on vegetation surveys performed during the 2022 field season, as well as the availability of plants/seeds, and site conditions during implementation (i.e., there will be some degree of 'field-fitting'). Therefore, current details in the document will be updated once the 2022 vegetation survey data is assessed.	We need to review the updated maps before we can be comfortable closing this comment.	updated maps showing seeding locations will be included in the separate vegetation planting plan that will be submitted to the Nations for review.		Open
49	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 122 Site Preposition	Revegetation	soy exisiting woody vegetation unable to be retained will be stockpiled for use in reclamation activities (e.g., erosion control, promoting biodiversity)	Agreed. Stockpiling of vegetation to be used for reclamation has been specified in the text in Section 5.3.3 Operations.	Section 2.1.3.2 Operations. Appendix G (2022 Vegetation Workplan) added.										Closed
50	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 132 Site Preposition	Revegetation	reporting existing site vegetation - mowing these materials will not aid in the establishment of more desirable species, we need to know what is there now in order to determine how best to deal with it	Agreed. Vegetation survey (desktop or field) will be performed in 2022 to determine existing flora assemblage and the degree to which mowing (cutting) will be required to enable establishment of the native species to be planted.	Appendix H (2022 Vegetation Workplan) added.	11/2/2021	As stated - mowing will not work. Can we have those surveys done before prescriptions are developed so we can be clear about what we are trying to achieve and how we will measure it once actions are taken.	July 6 2022	Please ensure Appendix G to include the response 'Mowing, tilling, or other ground preparation measures required for the planting plan. Mowing, tilling, or other ground preparation measures will be prescribed on a site-specific basis, depending on the results of the vegetation survey and following the guidance of qualified plant ecologists.'	A vegetation survey will be performed in Summer 2022. Information from this assessment will be used to better determine the vegetation types and numbers required for the planting plan. Mowing, tilling, or other ground preparation measures will be prescribed on a site-specific basis, depending on the results of the vegetation survey and following the guidance of qualified plant ecologists.						Closed
51	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 132 Planting Density	Revegetation	seeding rates or overstory is the most accurate way to ensure you achieve the desired composition of your plant community once established (Fortress Conservation) - even where converted to kg/ha, 20 kg/ha is really low	Noted. This rate was chosen by a professional botanist because we are proposing to retain (mow) existing herbaceous vegetation and enhance the species diversity and concentration with the seed mix.	Appendix G (2022 Vegetation Workplan) added.	July 6 2022	Please clarify and include the rationale for choosing the 20 kg/ha rate in the text. Please also clarify if the 20 kg/ha rate is for the entire seed mix, or for a different, because each seed species has a different weight, quality, soil preference etc, please include the percent of each species that will be used within the planting mix within the plan so that we can review	Oct. 2022	As stated in or Section 6.4.1 Mistiwa Creek Restoration, the final riparian planting prescriptions (e.g., plant selection, planting densities, seeding techniques and rates, and seeding mixes) will be based on vegetation surveys performed during the 2022 field season, as well as the availability of plants/seeds, and site conditions during implementation (i.e., there will be some degree of 'field-fitting').	updated seeding rates will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The finer seeding rates will be used to update the Fish Compensation Plan.	open
52	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 132 Planting Density	Revegetation	wet sites seeding rates are in the range of 400-5,000 seeds/m2, higher seeding rates are recommended when sites are present and when soil conditions are good (i.e., 1,000-5,000 seeds/m2) - decreased infill from surrounding species can reduce this seeding rate if desirable/native plant species are prevalent - higher seeding rates also ensure faster cover establishment	Noted. Vegetation surveys (desktop or field) will be performed to determine existing flora assemblage and soil conditions prior to increasing the seeding rate.	Appendix H (2022 Vegetation Survey Workplan) added.	July 6 2022			Comparison and density for proposed seeding rates. Please add in the plan that seeding rates will be adaptive based on 2022 field survey that will look at soil conditions, veg composition etc	Oct. 2022	As stated in or Section 6.4.1 Mistiwa Creek Restoration, the final riparian planting prescriptions (e.g., plant selection, planting densities, seeding techniques and rates, and seeding mixes) will be based on vegetation surveys performed during the 2022 field season, as well as the availability of plants/seeds, and site conditions during implementation (i.e., there will be some degree of 'field-fitting'). Please include the following information as a footnote so that we are confident that appropriate seeding rates will be used; "wet sites seeding rates are in the range of 400-5,000 seeds/m2, higher seeding rates are recommended when invasive plants are present and when soil conditions are good (1,000-5,000 seeds/m2)" We understand that there will be some 'field-fitting' for each site. In addition, this comment will remain open until we have received and reviewed the planting prescription and are confident seeding information is included in the plan"	updated seeding rates will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The finer seeding rates will be used to update the Fish Compensation Plan.	open
53	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 132 Planting Density	Revegetation	what seeding techniques will be implemented?	Several seeding techniques, including hydroseeding, may be used depending on soil conditions at the time seeding is to take place.	Appendix H (2022 Vegetation Survey Workplan) added.	July 6 2022			information must be added to the plan (appendix H)		Information on seeding techniques will be included in the final riparian planting prescriptions to be developed as a stand-alone planting plan after the 2022 vegetation survey are complete and the results are analyzed. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.				Closed
54	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 132 Planting Density	Revegetation	live stakes should be planted at a higher density to account for mortality of stakes (APA recommends 3 stakes per m2, US Forest Service recommends 2-4)	The plantings given propose 2 live stakes per m2, which achieves the minimum US Forest Service recommendations. The stakes to be used are fast rooting and rapidly growing species that are expected to establish quickly in the banks within the first year of planting. Some mortality is not anticipated to result in instability of the bank as the root mass created by the surrounding live stakes should provide engineering stability. The stability of the stakes will be monitored as a part of the ESMP. Additional plantings at a revised mix of plantings will be implemented should the success criteria not be met.	Appendix H (2022 Vegetation Survey Workplan) added.	July 6 2022			Because the level of mortality is unknown, it is recommended to follow an average of 3 stakes per m2 (as noted in previous comment). This will account for unforseen mortality rates and reduce the risk of very few live stake success. Where is an adaptive management plan found if additional planting is necessary?	Oct. 2022	Since we have received and reviewed the planting prescription and are confident that stake numbers per square metre have been included we will feel comfortable closing this comment. For now, comment ID#34 remains open with no additional questions. "	Updated cover numbers for riparian areas will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The final stake numbers will be used to update the Fish Compensation Plan.	open
55	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 132 Planting Density	Revegetation	what materials will be used for the brush layer cuttings - same as the live stakes? this technique requires a substantial amount of material - does it exist on site currently? What details are currently available on this technique - staking density, live vs. dormant material, etc. (steele has good guidance: http://www.sdfg.state.ak.us/Public_Info/Sdfg-streambankprotection.tourney)	Noted. The planting notes and species list include species and specifications for brush layer cutting. We propose that the species should be live, not dormant. Further details will added to the Compensation Plan. Specified in Table 6-1.	Appendix H (2022 Vegetation Survey Workplan) added.										Closed
56	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Site Preposition	Revegetation	where is topsoil coming from for this scope? What are the existing plant communities like in this area - are there invasives?	Topsoil salvage (stockpile or Tree) will be performed to determine existing flora assemblage in the area, including invasive species present and soil conditions. Further details will added to the Compensation Plan. Specified in Table 6-1. Additional topsoil is not expected to be required for most planting locations and will be added from surrounding areas only if needed.	Appendix H (2022 Vegetation Survey Workplan) added.	July 6 2022	Sheet 17 of 17 states "APPLY BELOW TOPSOIL TO THE TIMEA OF DISTURBANCE" ALONG THE PERIPHERY OF THE POND, INCLUDING THE TOP OF THE "LEAKY BANKED". Please be more specific (and add at the document) where this amount of topsoil is coming from. Further, please show a typical cut-fill in the text/ where you would expect to find topsoil (i.e., if needed, and why it will not be needed in other areas)	Oct. 2022	Topsoil will be obtained from the excavation of the ponds, as described in Appendix G Construction Environmental Management Plan. As indicated on sheet 17, only the area of disturbance will have topsoil applied, as this is where it will be needed. If additional topsoil is needed to meet the 50 cm specification (i.e., more than is salvaged during excavation of the ponds), then clean, noxious plant-free topsoil will be imported from an offsite location. The source of any additional material (including topsoil) will be clarified during the pre construction period.	Oct. 2022	- Please add information on topsoil (i.e., densely provided in round 4 response) to the plan. Sheet 15/17 also states "Top the "leaky bank with 300mm of topsoil and native seed mix as per details on sheet D1.1." The image on sheet D11 emaphasizes this will be done. Please clarify and confirm how much topsoil is to be used and precisely where it will be placed as these images and language is confusing and do not align (i.e., 300 vs 800mm)?	As requested, the topsoil information will be added to Appendix H. As indicated in Appendix H, the leaky bank will be capped with 300 cm of topsoil, while areas away from this bank will meet a 10 cm (100 mm) specification. The language will be clarified in the text.		Closed
57	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Planting Density	Revegetation	all shrub and seeding comments are the same as above	Noted	Appendix H (2022 Vegetation Survey Workplan) added.										Closed
58	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Planting Density	Revegetation	aquatic plants planting density is aligned with literature - may consider increasing slightly to ensure establishment (Fortress suggests 3-5 plants per square meter)	Noted. Growth and mortality will be monitored as per the monitoring timeline prescribed (Section 9.4.3).	Appendix H (2022 Vegetation Survey Workplan) added.										Closed
59	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Plant List - Ponds 1 and 2	Revegetation	seed mix - stream) all of these grasses are inappropriate for riparian areas (e.g., occur in upland areas) including sand dropseed (SMR 2, also does not occur in this area), junegrass (SMR 2), fringed brome (SMR 4, may be ok in creek proportions), slender wheatgrass (SMR 3), american vetch is a weedy species that takes over - we do not recommend using any american vetch, thickspike wildrye (SMR 3)	Noted. The seed mix will be revised based on the valuable feedback provided by KES/LDN/LAFN	Appendix H (2022 Vegetation Survey Workplan) added.	July 6 2022	The seed mix has not been updated to reflect KES/LDN/LAFN comments. E.g., american vetch, sand dropseed, junegrass are still within the proposed seeding mix for ponds 1 and 2, channel riparian areas Appendix C Holdstot Offsetting Detailed Design Drawings (Sheet 17 of 17) seed mix species for ponds 1 and 2 revised to remove sand dropseed, junegrass, fringed brome, slender wheatgrass, American vetch, and thickspike wildrye. Nearby riparian areas to be sourced for actual species composition to be used. The planting plan will provide updated seed mix information and is under development, following field surveys completed in summer 2022. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	Oct-22	Thank you for editing the plant list. However, this comment can not be closed until we have received and reviewed the planting prescription and are confident the correct seed mix has been included in the planting prescription.	Updated seed mix information will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The final seed mix for each site will be used to update the Fish Compensation Plan.	Open
60	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Plant List - Ponds 1 and 2	Revegetation	seed mix species which are better suited for this area include fringed brome, tufted hairgrass, red fescue, and timothy - consider including species like bluejoint reedgrass - assessing nearby riparian areas for species composition is the best way to ensure you are getting an appropriate seed mix	Noted. The seed mix will be revised based on the valuable feedback provided by KES/LDN/LAFN	Appendix H (2022 Vegetation Survey Workplan) added.										Closed
61	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Plant List - Ponds 1 and 2	Revegetation	what does the TEM M2 for willow species in this area? We suspect there are better species that could be planted in this location	TEM lists several willow species, including Bog, Scouler's, Copello, Geyer's, Pacific, Hooker's, and Sitka willow. Cited in Section 6.4.1 and Appendix G.	Appendix H (2022 Vegetation Survey Workplan) added.										Closed
62	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Plant List - Ponds 1 and 2	Revegetation	sites drain onto known dry grassland/ecosystem - this is not a wet/riparian species - this should be changed to mountain alder (SMR 1)	Noted. The plant species list to be included in the detailed planting plan will be revised based on the valuable feedback provided by KES/LDN/LAFN	Appendix H (2022 Vegetation Survey Workplan) added.	N/A	N/A	N/A	Planting list has not been updated to reflect suggested change. Please update.	July 6 2022	Appendix C Holdstot Offsetting Detailed Design Drawings (Sheet 17 of 17) seed mix species for ponds 1-3 changed from cirlka alder to mountain alder. The planting plan will provide updated plant lists and is under development, following field surveys completed in summer 2022. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	Oct. 2022	Thank you for editing the plant list. However, this comment can not be closed until we have received and reviewed the planting prescription and are confident the correct seed mix has been included in the planting prescription.	Updated seed mix information will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The final seed mix for each site will be used to update the Fish Compensation Plan.	Open
63	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Plant List - Ponds 1 and 2	Revegetation	consider planting black hawthorny as a riparian shrub	Noted. The plant species list to be included in the detailed planting plan will be revised based on the valuable feedback provided by KES/LDN/LAFN	Appendix H (2022 Vegetation Survey Workplan) added.	N/A	N/A	N/A	Planting list has not been updated to reflect suggested change. Please update.	July 6 2022	Appendix C Holdstot Offsetting Detailed Design Drawings (Sheet 17 of 17) black hawberry added to ponds 1-3 as a riparian shrub. The planting plan will provide updated plant lists and is under development, following field surveys completed in summer 2022. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	Oct. 2022	Thank you for editing the plant list. However, this comment can not be closed until we have received and reviewed the planting prescription and are confident the correct seed mix has been included in the planting prescription.	Updated seed mix information will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The final seed mix for each site will be used to update the Fish Compensation Plan.	Open
64	26-Oct-21			Jessica Lowery (W3)	Fish Habitat Compensation Plan	p. 135 Plant List - Ponds 1 and 2	Revegetation	aquatic plants: raft-oriented bulrush and american water plantain do not occur locally	Noted. The plant species list to be included in the detailed planting plan will be revised based on the valuable feedback provided by KES/LDN/LAFN	Appendix H (2022 Vegetation Survey Workplan) added.	N/A	N/A	N/A	Planting list has not been updated to reflect suggested change. Please update.	July 6 2022	Appendix C Holdstot Offsetting Detailed Design Drawings (Sheet 17 of 17) aquatic plants raft-clammed bulrush and american water plantain were removed from ponds 1-3. The planting plan will provide updated plant lists and is under development, following field surveys completed in summer 2022. This planting plan will be provided to reviewers for comment and provided as a construction level document supported by the FCP when available.	Oct. 2022	Thank you for editing the plant list. However, this comment can not be closed until we have received and reviewed the planting prescription and are confident the correct seed mix has been included in the planting prescription.	Updated seed mix information will be included in the separate vegetation planting plan that will be submitted to the Nations for review. The final seed mix for each site will be used to update the Fish Compensation Plan.	Open
65	18-Oct-22	Indigenous Communities	Kes-Nardar Gold Project Fish Habitat Compensation Plan Pursuant to Section 27.1 of the Metal and Diamond Mining Effluent Regulations	Christopher Bone (LGL), Corrine Sikora-Finn Nelson (CSFN), Social Environmental Associates (SEA)	MNRR Fish Habitat Compensation Plan Appendix 2 Effectiveness Monitoring Plan	6.1.3 Riparian Habitat Area 6.7 Habitat Balance	Riparian Habitat	The Blackwater Project (the project) will result in the construction of stormwater ponds adjacent to the Omineca Creek tail due to determination of avoidance placement. Riparian habitat will be lost adjacent to Omineca Creek, unconfined fish bearing, and non-fish bearing stream/pond segments due to the project. To account for this residual riparian habitat loss, offsetting was proposed in the MNRR fisheries offsetting plan to counterbalance these losses. To offset riparian habitat losses, the MNRR fisheries offsetting plan proposed an offsetting ratio of 0.17:1 for the gain/loss of riparian habitat is based on area-for-area (m2) accounting. Despite the MNRR fisheries offsetting plan previously highlighting the ecological importance of riparian habitat, a ratio less than 1:1 for riparian habitat area was recommended for several reasons (see Section 6.7). The primary excuse for not offsetting riparian habitat at a 1:1 ratio appears to be driven by the large amount of riparian habitat present in the headwaters of the upper Davidson Creek watershed, alongside small headwater streams supporting low densities of Rainbow Trout. It was argued that the contribution of the riparian habitat in the upper Davidson Creek watershed to adjacent and downstream fish habitat productivity would therefore be relatively low. We respectfully disagree with statements and rationale provided in the MNRR fisheries offsetting plan. Peer reviewed literature, and western science understanding on the ecological role of riparian habitat in headwater streams, highlights the importance of riparian to adjacent and downstream fish habitat productivity is high. A short synopsis highlighting the ecological importance of riparian vegetation on adjacent and downstream fish habitat productivity is provided after the conclusion of this comment. From a traditional indigenous values perspective, streams and riparian habitats supporting low density fish populations are of high value, not low value as suggested by Artemis. Indigenous values argue that lower fish densities warrant greater protection, and riparian habitat should be offset for at a ratio of 1:1.	Kes-Nardar Gold Project Fish Habitat Compensation Plan Section 6.7 Habitat Balance	02-May-22	Given the proponents response, it appears that they are not in agreement with CSFN's and Kwadacha's riparian habitat offsetting ratio of 1:1 despite the sound ecological rationale provided by CSFN. Rather the proponent suggests that a bylaw/no riparian habitat offsetting ratio of 0.15:1 (even less that the original offsetting plan ratio of 0.17:1) is adequate to offset the loss in Davidson Creek. Given the above information, CSFN still maintains its position that the MNRR fisheries offsetting plan does not adequately offset riparian habitat losses due to project development. CSFN maintains its position that riparian habitat be offset at a 1:1 ratio (i.e., 1 m2), which is supported by sound ecological rationale. The proponent suggests that riparian habitat is not limiting fisheries productivity in the watershed but does not state what does in the watershed, nor does the fisheries offsetting procedure even account for a limiting habitat assessment approach. While the proponent states that "CSFN's position is not based on any data", the supporting ecological information on why specifically fish habitat is appropriate. Given the lack of supporting rationale, CSFN's of the perspective that the selected ratio is simply driven by the maximum amount of riparian habitat gained at the Matthews Creek offsetting site to be able to be used as proposed under the MNRR fisheries offsetting plan.	The target 1:1 riparian replacement value is based on the prioritization of riparian habitat for identification, mapping, and planning for additional riparian planting zones in the Omineca Creek watershed is in progress. The results of field surveys and updated riparian planting zones will be shared with First Nations and DFO as they become available.										
66	24-Nov-21	Indigenous Communities		Al Irvine (New Gold)	Blackwater Gold Project Fish Habitat Compensation Plan, Appendix 2 Effectiveness Monitoring Plan P.70 6.5.2.3. Evaluation of Future Conditions	p. 74 Table 6-2 Habitat Gains from Compensation Measures - Area, Habitat Units by Life Stage, and Riparian Area	Fish & Fish Habitat	For each habitat segment, professional judgement was used to predict changes to the existing habitat (e.g., depth, width, spawning quality, canopy closure, etc.) that are expected post-restoration. Those predicted changes were evaluated using the same process as was used to assess existing conditions, and this formed the basis for the HEP assessment of habitat gains. P.6 Appendix E ESMP - Section 6.5.2.3 details how we evaluate future conditions: Can we reevaluate the habitat after the works to ver that it ranks equal to the HEP values predicted to determine that these treatments were appropriate to offset the habitat losses?	HEP is a valuable tool for evaluating and predicting habitat quality and offsetting detailed design to adequately offset for losses. However, it has limited applicability as a long term monitoring tool, given the inherent natural variability of the recieved system and the variability of the habitat measurements. Progress of the restoration works can be more accurately monitored using the methods prepared in the effectiveness monitoring plan. The basis for compliance monitoring and adaptive management will remain the existing success criteria in the effectiveness monitoring plan	Section 1.4	N/A	N/A	N/A	In order to induce subjectivity and uncertainties related to HEP, a 2:1 area to area ratio for reclaimed vs impacted riparian habitat is better suited for calculating offsets for this compensation plan. However, HEP should be used to assess as one of the measures of success (as progression towards success) of the works.	20-Jun-22	As discussed in Section 5.1.2.1 Overview of HEP, the HEP process has been widely used across North America as a reliable model for quantifying habitat loss. It provides a means of quantifying biologically relevant habitat losses or gains with consideration of habitat preferences and requirements of a species' different life stages. The HEP process is also flexible and can be customized to a project and provides a simplified measure of habitat losses and gains and does not incorporate an index of suitability related to habitat quality. Further, the HEP assessment incorporates an index of alteration to capture the decreased habitat value resulting from cattle disturbance in the offsetting works. Area to area ratios would not accurately reflect habitat value changes from offsetting works. To minimize any subjectivity, project-specific HEP methodology (Appendix I Vegetation Survey Work Plan) was developed in consultation with regulators prior to the start of compensation areas. The proposed ratio of sixteen habitat compensation to impact is 1.86:1 in Habitat Units (HU). A detailed description of the HEP methodology can be found in the KGCP FHCP Information Request #9 Memorandum dated September 8, 2022.	Oct. 2022	Summary tables have been provided for areas in the mine/biology footprint within the KGCP FHCP Information Request #9 Memorandum dated September 8, 2022 however there is no detailed accounting of the HEP for the offsetting areas. There is some paragraphs of text about how it was done and how it was QA'd but none of the actual data is provided within the report to back it final summary. Additionally, it is unclear how much of the work was ""greenfielded"" and how much of the work was done using some photo interpretation. There a lack of some comparison between conditions over the years but that data is not presented. Please see comment from Round 3 (July 2022). The risks that visegar reporting, unreviewed data, a lack of follow-up biological data collection, vague strategies for riparian restoration and generally overly optimistic projections will lead to net losses of habitat productivity are high. Please provide the data and reporting to show that the risks are being managed to acceptable probability that the very real impacts of the mining operation will actually be offset elsewhere (regardless of how well it is monitored and/or how transparently that data is shared).	The expected information is now in Appendix A of the Information Request #9 Memorandum that has been re-submitted for review.		Open
67	24-Nov-21	Indigenous Communities		Al Irvine (New Gold)	Blackwater Gold Project Fish Habitat Compensation Plan, Appendix 2 Effectiveness Monitoring Plan	p. 2-2 Success Criteria	Fish & Fish Habitat	In order to ensure habitat conditions (e.g., habitat quality, flow/morphology, biophysical characteristics) at the reference site is similar to the compensation site, candidate reference sites will be selected in the field prior to conducting the monitoring program. "" Can we do this now so that we can be clear about what it is we are trying to achieve and how we are going to measure it? Can we do a HEP on the reference site?	Reference site, and restoration/enhancement monitoring sites were first identified and assessed in Summer 2021 and will be further evaluated in Summer 2022. Reference and restoration/enhancement sites were evaluated using the same methodology to facilitate comparison. Results of the 2021 assessment will be included in an upcoming 2021 baseline conditions report, which will be shared with First Nations for review, when available. Since HEP analysis was not conducted on reference sites outside of the restoration/enhancement sites, it is not possible to determine if habitat quality is similar, or if habitat quality is of a desired quality due to restoration. A HEP analysis could be performed on the reference location for comparison with the compensation sites, but any observed differences would be the result of a combination of natural variability, measurement variability, and other external factors. As described in the comment response above (comment #6), HEP has limited value as a long term monitoring tool. Therefore, the basis for compliance monitoring and adaptive management for the reference and restoration/enhancement sites will remain the existing success criteria in the effectiveness monitoring plan.	No update for this version (April 2022).	N/A	N/A	N/A	Reference sites should be determined before the compensation plan is finalized as it is an important component of the monitoring and we want to see that the sites selected are suitable and that the parameters to be measured are clearly documented and inline with a robust monitoring program.	30-Jun-22	Two sites identified and assessed in Summer 2021 and currently are being further assessed during 2022 field studies. Results from the 2021 field assessment report will be shared with First Nations for review, as will results from the 2022 field studies when available.	A - "Field Survey Report" - the 2021 has been shared but unless I am mistaken there is only one reference site for Matthews Creek identified and it is just upstream of the Ranch. It is not clear why this site was chosen, what the habitat was like or any information on the comparison of the riparian area. Appendix e XLS "Site Look" was filled out with details of the widths and cover types but the reviewer has seen no baseline data and none is included in the ""Field Survey Report"" (except the location of the site). Maybe the information is elsewhere and HEP was conducted at the references sites? B - A re-occuring theme that ""the data will be shared"" when available but what we see is a couple thin tables here and there more than a year after assessments with minimal details that tells us nothing more than there is no evidence of a program in place that comes any where near demonstrating diligence let alone tracking impacts and protecting caured assets."	The expected information on the Matthews Creek reference site will be added to an addendum to the 2021 Field Report submitted to the Nations for review. This site was selected due to it being accessible for surveying, and having similar habitat characteristics to the downstream proposed compensation sites.		Open

Blackwater | Schedule 2 - Fish Habitat Compensation Plan (FP)

Tracking ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Comment Theme	Comment	Response	Consultation with KSCC Fish Habitat Compensation Plan	Round 2 Comment Date	Round 2 Comment	Round 2 Response	Round 3 Comment Date	Round 3 Comment	Round 3 Response	Round 4 Comment Date	Round 4 Comment	Round 4 Response	Status
48	20-Nov-15	Indigenous Communities		Al Irvine (New Gold)	Blackwater Gold Project Fish Habitat Compensation Plan, Appendix 2 Effectiveness Monitoring Plan		Fish & Fish Habitat	Please provide a plan for where material excavated from the ponds will be placed. This may provide insight into grind opportunities for revegetation of riparian areas...	Excavated rock will be stockpiled at least 50 m from the top of bank, since such grind exact placement location will be determined during construction of the ponds and will depend on local topography and vegetation. Site-specific details of material stockpile locations will be available prior to implementation. Currently, no placement of excavated material in streamside riparian areas is proposed.	Table 6-6	N/A	N/A	N/A	N/A	04-Jul-22	Please provide a plan within the subplot documents for precisely where material excavated from the ponds will be placed. Please accompany plan with map and aerial figure showing the planned location of this material.	The requested information is not available because exact procurement locations will depend on local topography and vegetation. Site-specific details of material stockpile locations will be available closer to implementation of the construction program. However, excavated material will not be placed in environmentally sensitive areas (e.g., wetlands, riparian areas) and will be appropriately stabilized to minimize protection.	Oct. 2022	You commit just per planis into agreement, code or opinion and expect them to grow enough to minimize the riparian cover. Excavated dirt from the ponds could potentially be used to amend existing soils. Additionally there is significant areas of drained runnaway prescribed that will be left to naturally revegetate. Perhaps these areas could be utilized for the material. Or compaction could be used for that. Opportunity knocks. Trying to catalyze thinking about ways to leverage one activity on the site towards the next. There will be exposed soils in sensitive areas due to the wades. Maybe the 2 million dollars worth of erosion control material in the budget are going to help mitigate instream impacts and we can consider that dirt from our area of the pits can be moved to another and the benefits of a project that functions as intended are greater than the risks that come sediment will end up in the channel.	Noted.		
49	02-Dec-15	Indigenous Communities	Schedule 2 Difficult Plan Additional Data Requests(Duffy&Matthews_Creek_Reach_Ortho_2016.ecw https://1drv.ms/u/s!Ap-dzta-gzu-bc3dbtoeeVJfwchk?e=bBAcen wetlands	Al Irvine (New Gold)	Blackwater Gold Project Fish Habitat Compensation Plan, Appendix 2 Effectiveness Monitoring Plan		Fish & Fish Habitat	Aerial imagery indicated extensive flooding of ceniclaroid areas, trenches historically dug to potentially drain the land for range practices and harvesting. The freshwater atlas wetland layer which shows the entire site as a wetland. Is the Matthews Creek corch meant to be a giant wetland complex with massive areas of beaver impoundments if left to its own means? Are we trying to turn a wetland which has been historically drained by multiple irrigation trenches and the removal of beaver dams into an upland stream? How can we clarify this? TEMP Please provide BAC and wetland classification data for the Matthews site.	Periodic flooding does not necessarily indicate the entire Matthews Creek area was originally a wetland. There is an area of wetland restoration adjacent to Matthews Creek; however, the entire drainage area is not intended to become an open-water wetland following restoration. The goal of the compensation works described in BC Gold's Schedule 2 MDMER application is this area is to increase fish habitat availability and eventually to increase fish numbers in Matthews Creek. Beaver activity is expected to occur throughout the area. As discussed with First Nations and then consultants in multiple fisheries technical meetings, beaver presence is viewed as a positive for the ecosystem. Beaver activity will likely alter some aspects of the area, but these alterations will be monitored (Appendix 2). Adaptive management measures may be considered to minimize fish access if persistent barriers are created, although any measures used will aim to minimize impacts to beavers and maintain habitat complexity. A vegetation and ecosystem survey will take place in the summer of 2022 to classify current vegetation presence and wetland types in the fisheries and wetland compensation areas and lead to a better understanding of overall baseline conditions for the area. The results of this classification will be provided to FNs and incorporated into a pre-construction vegetation management/planting plan.	Appendix 6-1 Appendix G (2022 Vegetation Workplan) added.	N/A	N/A	N/A	N/A	04-Jul-22	When it is completed, please provide BAC and wetland classification data for the Matthews site within the document.	As indicated in the previous response, the results of the 2022 vegetation presence and classification of wetland types in the fisheries and wetland compensation areas will be provided to FNs and incorporated into a pre-construction vegetation management/planting plans. This planting plan will be provided to reviewers for comment and provided as a construction-level document supported by the FCP when available.	Oct. 2022	This information should be provided in the planning stages to ensure the approach proposed makes sense and before the Schedule 2 amendments are completed.	Information on vegetative presence and classification of wetland types will be included in the separate vegetative planning plan that will be submitted to the Nations for review.	Open
50	23-Nov-15			Jessica Lokwiy (MEA)	Fish Habitat Compensation Plan	p.76 section 6.6	Riparian	Comment from Nov 23 meeting: clarify sentence "Riparian vegetation will be restored/enhanced along the entirety of the proposed channel works..." to explain that revegetation will occur in segments with limited riparian vegetation, rather than along the entire extent	Agreed. The text has been clarified to incorporate the reviewer's correction.	Added to Section 6.6 Habitat Gains from Proposed Compensation Measures										Closed
51	N/A			Al Irvine (New Gold)	Blackwater Gold Project Fish Habitat Compensation Plan, Pursuant to Section 27.1 of the Metal and Diamond Mining Effluent Regulations	6.8 Compensation Timeline P 69	N/A		N/A				N/A	04-May-22	The compensation habitat will provide exactly the full value in habitat units described in section 6.5 within 5 to 7 years after completion due to stabilization and establishment of periphyton and benthic invertebrate communities." Added June 30, 2022 - Periphyton and benthic invertebrate communities need to be monitored as part of the effectiveness monitoring program. Please include	Monitoring benthic invertebrate communities has been added to the ARP Appendix D Section 3.3.1 Monitoring Approach and Section 6.2.2 Success Criteria. Periphyton is not included in the monitoring plan due to potential limited substrate availability in the ponds and expected high variability reducing the feasibility of this measurement.	Oct. 2022	Section 3.3.1 Monitoring Approach mentions LWAN surveys of the ponds but no mention of data collection in Matthews Creek. Matthews Creek should be included in the number and location of sites (study and reference) mapped and tabled within the report. Section 6.2.2 Success Criteria is extremely vaugue. Anything is ""Comparable"". This should be defined along with the metrics that will be used to assess productivity as well as community composition/diversity.	Noted sampling of the Matthews Creek channel following the LWAN protocol is unlikely to be successful, given the typical water depth and abundance of low velocities. Sampling can be conducted using a substrate grab samples (e.g., using a Ponar sampler). Benthic invertebrate survey in Matthews Creek will be added to Section 3.3.1 for Matthews Creek as requested. Metrics of community composition and abundance will be calculated and evaluated. More specific success criteria metrics have be added to Section 6.2.2.	Open
52	N/A			Al Irvine (New Gold)	Blackwater Gold Project Fish Habitat Compensation Plan, Pursuant to Section 27.1 of the Metal and Diamond Mining Effluent Regulations		N/A		N/A				N/A	03-Jun-22	In order to reduce subjectivity and uncertainties related to HEP, a 2:1 area to area ratio for restored or impacted instream habitat is better suited for calculating offsets for this compensation plan.	Some as above response to #50. As discussed in Section 5.3.2.1 Overview of HEP, the HEP process has been widely used across North America as a reliable model for quantifying habitat loss. It is acknowledged that HEP is not perfect and is subjective in many ways, with consideration of habitat preferences and requirements of a species' different life stages. As per Section 5.3.1 Instream Habitat Area, an instream area calculation provides a simplified measure of habitat losses and gains and does not incorporate an index of suitability related to habitat quality. Further, the HEP assessment incorporates an index of Alteration to capture the decreased habitat value resulting from cattle disturbance in the offsetting works. Area to area ratios would not incorporate this habitat alteration index and would be more subjective and subjectively. project-specific HEP methodology (Appendix I Vegetation Survey Work Plan, Gart 2021) was developed for assessment of existing and future compensation areas. The proposed ratio of instream habitat compensation to impact is 1.86:1 in Habitat Units (HU). A detailed description of the HEP methodology can be found in the 2021 FHCP Information Request #9 Memorandum Sent September 9, 2021.	Oct. 2022					Open
53	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	pg. 49 Section 5.1.3 Riparian Habitat Area	Fish & Fish Habitat	N/A	N/A	N/A			N/A	03-Jun-22	A 30m glass riparian habitat loss is calculated using 15 m buffer for fish-bearing and 5 m buffer for non-fish-bearing streams. I am unable to find guidelines that cite these setbacks. Riparian habitats have extensive lateral hydrologic connections to the river and provide important ecological functions to the river, stream and groundwater. Please use the following riparian management areas (RMA) identified in the BC Forest practices codes (code these buffers are for each side of the creek, not combined): Fish bearing: S1 (>100-m-width): 100-m buffer S1 (>20-m): 70 m S2 (5–20-m): 50 m S3 (1.5–5 m): 40 m S4 (<1.5 m): 30 m Non fish bearing: S5 (>3 m): 30 m S6 (<3 m): 20 m	As presented in section 5.1.3 Riparian Habitat Area, the application of three riparian zone buffer widths is consistent with the BC Forest Practices Code Fish-Stream Identification Guidebook (FPC 1998). The Land Development Guidelines for the Protection of Aquatic Habitat (DFO 1992) identify a 15 m buffer (referred to as "leave-strips") as appropriate for fish-bearing water bodies. The Riparian Reserve Zone for non-fish bearing reaches is zero. Under the Riparian Area Regulations, which relate to development near aquatic habitats, the riparian "zone of sensitivity" ranges from 5 m to 30 m depending on channel type and the nature of large woody debris. Considering these legislative standards, and that the Project is not subject to the Riparian Area Regulations (development will be setback at low-densities and perhaps only necessitate), the 30 m riparian zone width is in buffer on each sides was chosen. The same buffer was applied to non-fish bearing water bodies, to account for the value of the riparian vegetation to downstream fish habitat.	Oct. 2022	Can you show specifically how you used BC Forest Practices Code and by extension the Riparian Management Area Guidebook to inform riparian buffer width? You refer to DFO and MAR documents, which aligns with the Slim/Slim-pet Nuttl, but it is unclear how the Forest Practices Code was used. If you are only using the DFO/MAR guidelines, then it is misleading to include information about the BC Forest Practices Code in the text. If the Forest Practices Code was also indeed used, I would also like to point out the RMZ/RMA/RMA widths refer to only one side of the creek, not both, and that there are minimum retentions % required within the RMZs. Please describe how you incorporated both of these in the calculation of riparian losses.	See BC Riparian Management Area Guidebook should have been cited instead of the BC Forest Practices Code. The former contains the riste Riparian Management Area Guidebook) to inform riparian buffer width? You refer to DFO and MAR documents, which aligns with the Slim/Slim-pet Nuttl, but it is unclear how the Forest Practices Code was used. If you are only using the DFO/MAR guidelines, then it is misleading to include information about the BC Forest Practices Code in the text. If the Forest Practices Code was also indeed used, I would also like to point out the RMZ/RMA/RMA widths refer to only one side of the creek, not both, and that there are minimum retentions % required within the RMZs. Please describe how you incorporated both of these in the calculation of riparian losses. Existing Reserve Zone (harvesting not permitted) and Management Zone (restrictions to harvesting apply) widths for different stream classes. The Reserve Zone of zero for non-fish bearing streams (S5 and S6) is referred to in the Round 3 response.	Open
54	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Section 5.2 Quantification of Habitat Loss; Figure 5-1	Fish & Fish Habitat	N/A	N/A	N/A			N/A	03-Jun-22	What is the nature of flow alterations in Davidson Creek downstream of the site (reaches 1-4) and anticipated effects on fish habitat? Flow releases should mimic a natural freshet (at a 2-year flood flow) and provide a similar range of flows over the year compared to pre-construction. If a Touching Freshet flow is not provided, there may be a loss of suitable habitat for spawning gravel, which should be accounted for in compensation measures. Furthermore, if flows are frequently below pre-construction levels, there is loss of usable habitat which also should be accounted for.	As described in Section 2.3.2.4 Project Components Located Off the Mine Site not subject to Schedule 2 Amendment, controlled release of water from the freshwater reservoir (FWR) will supplement flow in Davidson Creek during project construction and for the initial five years of operation. In year 6 of operation the Freshwater Supply System (FWSS), which will pump water from Teleblue Lake, will begin supplementing flows in Davidson Creek to meet the instream flow needs (IFN). The FWSS will be designed to provide sufficient water to Davidson Creek to meet the required to provide 90% of the available instream habitat under baseline conditions. Monitoring data on flows, temperature, and other biophysical elements, collected during the first 5 years of operation, will be used to drive adaptive management and implementation of the FWSS after this period. The FWSS is predicted to be consistently needed from year 6 of operation through to closure, providing approximately 10% of the total annual flow in Davidson Creek. The IFN regime has been designed to include flushing flows in Davidson Creek to mobilize fine sediments directly beneath areas of deleterious substance placement. The loss of these stream segments is directly addressed by the Fish Habitat Compensation Plan. The reviewer is correct that adjacent stream areas will also be lost. However, these losses are accounted for in the fisheries Act Authorization application (HAA), Section 6.2.2 and 6.4.2.2, and in the HAA Document for Illustration of the division of stream segments 3-4 (Routing.Ecompensation).	Oct. 2022		Closed		Closed
55	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Section 5.2 Quantification of Habitat Loss; Figure 5-2	Fish & Fish Habitat	N/A	N/A	N/A			N/A	03-Jun-22	In reference to Figure 6-2, provide justification as to why stream lengths between two impacted areas are not considered impacted as well. Those sections of creek will have lost long-bulkout connectivity and will not be usable to fish upstream or downstream.	Figure 5-2 shows only the stream lengths directly beneath areas of deleterious substance placement. The loss of these stream segments is directly addressed by the Fish Habitat Compensation Plan. The reviewer is correct that adjacent stream areas will also be lost. However, these losses are accounted for in the Fisheries Act Authorization application (HAA), Section 6.2.2 and 6.4.2.2, and in the HAA Document for Illustration of the division of stream segments 3-4 (Routing.Ecompensation).	Oct. 2022		Closed		Closed
56	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Section 5.2 Quantification of Habitat Loss	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	Is the transmission line included in habitat loss calculations? If not, please provide the area of riparian habitat removed for the transmission line, and the number and stream/waterbody it is in.	The transmission line impacts are not included in this habitat compensation plan because it does not involve the deposit of deleterious substances into fish-bearing waters. Any impacts to fish habitat from transmission line will be submitted as a separate application for review by DFO.	Oct. 2022		Closed		Closed
57	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	pg. 53 Section 5.2 Quantification of Habitat Loss	Fish & Fish Habitat	N/A	N/A	N/A			N/A	03-Jun-22	Earlier on page 36 there is mention of 2 Rainbow Trout populations spawning in reach 13 on Davidson Creek and on page 53 there are no HUs assigned to the spawning/egg incubation life stage for reach 15.	Although marginal spawning habitat is present in small quantities (2.8 HU) in Reach 15, HSI evaluation is performed on the reach scales, which is dominated in Reach 15 by cascade type 1, riffle type 3, glide type 2, and pool type 2. None of these habitat types have associated spawning/egg incubation suitability values, resulting in a zero HU result (Appendix H Detailed Habitat Evaluation Procedure Table 3-1). Spawning habitat in Reach 15 is not considered to be important for the Rainbow Trout population in Lake 16, which likely spawns primarily along the shoreline (Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report, Palmer 2022).	Oct. 2022	Please confirm that these additional measures will be reviewed during the permitting stage. Please also make reference to these memos and additional offsetting measures in future versions of the Compensation Plan.			The reduction of small areas of habitat to 0 habitat value highlights one of the shortcomings of fish-based accounting, and a larger discussion about this needs to be held.	Will Gold acknowledges that fish-based accounting does have shortcomings, as the reviewer noted. However, the evaluation of habitat loss and compensation using both HU and area-based accounting does give an accurate picture of fish habitat. Will Gold is committed to continued engagement with the Nations on the Fish Compensation Plan, including habitat accounting on the mine site and at the habitat compensation sites.	Open
58	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix C Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	Spawning habitat is potentially a limiting factor in Matthews Creek. There is mention of 2 spawning bars for lower portion of the creek, which is otherwise dominated by fine substrates. Additional spawning (cobbles/boulders). The middle reaches are unsuitable due to local geomorphology, and there is no mention of spawning habitat in the upper reaches. As some spawning habitat will be degraded at the mine site, additional spawning habitat should be considered in the lower reaches of Matthews Creek or elsewhere in the system.	Matthews Creek is unsuitable for spawning and is not being used for spawning Rainbow Trout. Therefore, there is no imperative to build spawning habitat in this type of low-gradient environment. As per Dyllach Ranch enhancement on Chinkliluz Creek (Fish Habitat Plan Section 6.4.2.1), spawning habitat is not considered to be habitat type by reviewing a locally-relevant drainage that supports rainbow trout spawning. A memo and design package describing proposed additional offsetting at Dyllach Ranch and other locations is under development.	Oct. 2022	The reviewer was referring to modelling to support instream designs for the Matthews Creek offsetting measures. What site hydraulic data were used to inform the designs?			The proposed additional compensation measures will be reviewed during the permitting stage. The Dyllach Ranch Reconnaissance Memo, describing the initial results of compensation evaluation, was provided to ECNOMI on July 25, 2022. These conceptual plans are currently undergoing detailed design and will be shared with Nations when complete. As well, additional memos and offsetting measures will be added to the revised Fish Compensation Plan and submitted to the Nations for review.	Open
59	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix C Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	Please conduct, if not already completed, hydraulic modelling, flood frequency analyse, and historical flow analysis to support determination of stable bankfull width, stable boulder sizes, pool-bed elevations, and other design elements.	Hydraulic modelling using historical flow analyses to determine environment thresholds and, subsequently, flushing flows for Davidson Creek are outlined in the Fish Habitat Compensation Plan (Section 5.3.2.2 Instream Flow Releases for Channel Forming Flows (i.e., bankfull flow events) that affect stream banks, boulders, and bed elevations are high-magnitude, low-frequency events. The construction of mine and associated infrastructure will eliminate the sediment supply to Davidson Creek above the FWSS. Since there will be no incoming sediment to replace the sediment normally eroded during higher flows, channel forming flows also need to be reduced to account for the lack of sediment supply. The IFN regime has been designed to include flushing flows in Davidson Creek to mobilize fine sediments directly beneath areas of deleterious substance placement (Table 5-6). The IFN regime is capable enforcing and transporting a designated sediment without causing significant geomorphic changes to the stream.	Oct. 2022	The reviewer was referring to modelling to support instream designs for the Matthews Creek offsetting measures. What site hydraulic data were used to inform the designs?			Proposed bank treatments including re-establishing bankfull dimensions along Matthews Creek, are primarily based on observed bankfull channel dimensions from nearby un-disturbed segments. Localized channel 'blowouts' (i.e. over-widening) were caused by cattle tramping along Matthews Creek rather than progressive bank erosion and/or channel widening. Proposed bankfull dimensions at segments 1, 3-4, 92, 12, 37, and 44 are based on the bankfull widths, depths, and side slopes of existing, undisturbed channel as measured in the field through topographic surveys and in GIS. A hydraulic model is not required to size the proposed bankfull dimensions. Proposed boulders clusters (> 500 mm) and cobble/boulder bank protection (> 250 mm) will not be entrained (i.e., surface sediment is incorporated into a fluid flow) along Mathews Creek due to it's extremely low gradient (<0.5%) and good hydraulic access to the floodplain during floods (bankfull flow does not have the tractive forces [i.e., force required to produce or create motion] to transport boulders). There is currently no cobble or boulder in the study reaches of Matthews Creek, indicating the channel is unable to transport these larger materials. The normal water level of the proposed pond elevations were based on topographic surveys (fall 2019) and review of hydraulic data (stage and discharge) collected during snow and ice-free conditions in 2014 and 2019 to 2022 (Knight Piesold 2021). The outlets of the ponds are design to be deep to maintain connection if water levels lower. The seasonal variation of the Mathews Creek stage data was also accounted for when designing the side slopes and shoreline elevation of the ponds. Knight Piesold. 2021. Blackwater Gold Project. 2020 Hydrology and Water Temperature Baseline Report.	Open
60	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix C Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	Please include alder and birch in your planting prescriptions or provide justification why they are unsuitable for this site.	Additional information on planting prescriptions will be included in the final riparian planting prescriptions to be developed as a stand-alone planting plan after the 2022 vegetation survey are complete and the results are analysed.	Oct. 2022	Where can we expect to see this plan?			Information on planting prescriptions be included in the subplan vegetation planting plan that will be submitted to the Nations for review as soon as possible.	Open
61	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix C Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	Redecking comment 9, 800 plants + 500 stakes can not be found in the drawings. Please provide the source of a recent project in where ~1500 plants were planted along a 200-m stretch of creek with significant bare patches remaining.	As indicated in the response to #48, the reference reaches have approximately 60% to 70% vegetation cover. The planting prescriptions are designed to allow the site to spread and expand to eventually provide 60% woody vegetation cover. It is acknowledged that the proposed plantings will achieve the 60% cover goal within the 10 year monitoring period. The final riparian planting prescriptions to be developed as a stand-alone planting plan after the 2022 vegetation surveys are complete and the results are analysed. This planting plan will be provided to reviewers for comment and provided as a construction-level document supported by the FCP when available.	Oct. 2022	Will we be able to review this document in the permitting phase? While the reviewer understands that a detailed planting plan is a construction-level documents, there is value in having key concerns/foundational elements (e.g. planting density/# of plants) of the planting plan viewed out at the permitting stage, rather than later on in the construction stage. The Nations/reviewers should be left with a certain level of comfort that the resulting detailed plan will achieve the end goal of 60% woody vegetative cover of opportune species.	Yes, the corporate vegetation planting plan that will be submitted to the Nations for review as soon as possible.	Open
62	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix C Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	At areas with high erosive force, I suggest adding some boulders to the toe of bank to protect LWD installments from being scoured out. While we should minimize hard armouring as much as possible, few boulders to protect LWD is fine.	The detailed design drawings presented in Appendix C Habitat Offsetting Detailed Design Drawings are generalized and are not specific to individual sites. Specific biologically-relevant placement of materials such as boulders will be decided for each site during construction, based on feedback from on-onsite qualified professional.	Oct. 2022	Can we expect to review site-specific prescriptions and drawings prior to construction?	Yes, site-specific prescriptions and drawings will be submitted to the Nations for review prior to construction. Installation of large woody debris (LWD) features will be overseen and locations confirmed by a fisheries biologist.	Open
63	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix C Habitat Offsetting Detailed Design Drawings	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	Ensure some LWD is placed in pool habitats to provide cover during fishing/resting.	The detailed design drawings presented in Appendix C are generalized and not specific to individual sites. Specific biologically-relevant placement of materials such as LWD will be decided for each site during construction, based on feedback from on-onsite qualified professional.	Oct. 2022	Can we expect to review site-specific prescriptions and drawings prior to construction?	Yes, site-specific prescriptions and drawings will be submitted to the Nations for review prior to construction. Installation of large woody debris (LWD) features will be overseen and locations confirmed by a fisheries biologist.	Open
64	N/A			Wenley Yuen (MOE)	Fish Habitat Compensation Plan	Appendix G Effectiveness Monitoring Plan	Fish & Fish Habitat	N/A	N/A	N/A			N/A	21-Jun-22	In general, the monitoring plan lacks sufficient details on methods and quantitative metrics of success. For each monitoring parameter, please include sampling methods, monitoring locations, # of sampling points, sampling schedule (frequency and time of year), and a quantitative metric for success.	The monitoring plan presented in the ARP (Appendix D) Table 3-1 and Table 3-2 including monitoring parameters, sampling frequency, and metrics for success. Monitoring locations for Matthews Creek will occur at the three established sampling locations presented in the Blackwater Gold Project Fish and Aquatic Resources 2021 Field Survey Report (Palmer 2022). These locations have been referenced in the document. The off-channel pond locations have not yet been selected, but will be confirmed following completion of the Summer 2022 surveys. Sampling methods are discussed in the ARP (Appendix D) Section 3.2.1 Monitoring Approach.	Oct. 2022	Are you provide some details on how the monitoring locations were selected? There is currently very little information, and it feels like 3 sites is not enough. Some questions that come to mind: what length of creek is encompassed in each monitoring location? How many IPs per site? Can you provide the rationale for how three sites sufficiently represent the entire 5 km, and how they are good locations to monitor response indicators to restoration? In Table 3-1, with respect to the measurable parameter "Flow" and indicator "Restored habitat remains wetted with sufficient flow for use by rainbow trout". How will you measure this? Please clarify in text. IA profile was a "physical viability" parameter to be measured in Table 3-1 under the ERP, but it was not measured during the 2021 Field Survey Report. Was it conducted in 2022? It's important to get a pre-restoration profile.			

Clinton Neumar, H.R. and Newcombe, C.P. 1977. Minimum acceptable stream flows in British Columbia: A review. Habitat Protection Section, Fish and Wildlife Branch, Ministry of Recreation and Conservation, Victoria, British Columbia. Fisheries Management Report No. 70. December 1977.

Workorder	Schedule 2 - Fish Habitat Compensation Plan (FP)																				
Review ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Comment Theme	Comment	Response	Concordance with KIOC Fish Habitat Compensation Plan	Round 2 Comment Date	Round 2 Comment	Round 2 Response	Round 3 Comment Date	Round 3 Comment	Round 3 Response	Round 4 Comment Date	Round 4 Comment	Round 4 Response	Status
95	N/A			Wemley Yuen (KIOL)	Fish Habitat Compensation Plan	Appendix 4 Effectiveness Monitoring Plan	Fish & Fish Habitat	N/A	N/A		N/A	N/A	N/A	23-Jun-22	Following up on comment 43, Table 3-2 has not been revised to address the comment (to add % vegetation cover targets for annual increases instead of using just "increase", which is vague). Furthermore, a third cover % target after 20 years should be set as a metric of success.	Response to Round 3 Comment 43 is: Table 3-2 has been updated to add a target of 80% woody cover by year 10 has been added to Table 3-2 to match current woody cover at reference sites. Due to expected variability between years, a set percentage increase for each year has not been included.	Oct. 2022	Please make the same revision for Table 3-1 for riparian vegetation.	This revision of 80% woody cover by year 10 has been added to Table 3-1 as well.	Open
96	N/A			Wemley Yuen (KIOL)	Fish Habitat Compensation Plan	Appendix 4 Effectiveness Monitoring Plan	Fish & Fish Habitat	N/A	N/A		N/A	N/A	N/A	23-Jun-22	In Tables 3-1 and 3-2, the current targets for fish utilization are that they are "comparable to pre-restoration and reference site". Which is the target? Pre-restoration or reference site? If this relates to the BACI design, please clarify what project circumstances would restoration be deemed a success.	For Table 3-1 the comparison of fish presence, abundance, and size-class distribution with both pre-restoration data and a reference site is accurate. The comparison with pre-restoration data is important to determine if the variable being measured is improving compared to that baseline. The comparison with a reference site is important to account for seasonal and annual natural variation. Table 3-2 currently indicates fish presence, abundance, and size-class distribution will be compared to a reference site.	Oct. 2022	Thank you for the clarification. Can you ensure it is reflected on page 10 of Appendix 4. The following sentence should be revised to provide the proponent's explanation as to why comparison to both pre-restoration AND reference site are important. Currently, the sentence only mentions the reference site. "Fish utilization indicators include assessing whether abundance, biomass, and size-class distribution of rainbow trout are comparable to reference sites and that fish are ultimately utilizing the restored areas." Also, for Table 3-1 and 3-2, can you revise Fish utilization - Presence/Absence to be similar to the others: Restored areas provide habitat for rainbow trout of various life stages comparable to to pre-restoration and reference site data	Per requested revisions to Appendix 4 on fish utilization have been made.	Open
97	N/A			Wemley Yuen (KIOL)	Fish Habitat Compensation Plan	Appendix 4 Effectiveness Monitoring Plan	Fish & Fish Habitat	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	Oct. 2022	Why is CABIN only conducted for off-channel ponds?	Please see the response to Round 4 comment 93-1 - CABIN sampling is unlikely to be suitable in the Matthews Lewis channel due to water depth and substrate composition. Instead, grab samples can be used to capture benthic invertebrates. Metrics of community composition and abundance will be used to assess success.	Open
98	N/A			Wemley Yuen (KIOL)	Fish Habitat Compensation Plan	Appendix 4 Effectiveness Monitoring Plan	Fish & Fish Habitat	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	19-Oct-22	Table 3-2: how will you measure max water/ice depth if you don't go there during winter or calculate it in the Table?	A water study/field visit is planned. A clarification will be made to the text in Table 3-2.	Open

Exhibit 5
Aquatic Effects Monitoring Plan – Follow-up Program (ITT)

Round 1
Round 2
Round 3

Blackwater | Comment Tracking Table 3.14 Follow-Up Program

ADMIN								COMMENTS	
ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Comment Theme	Comment	Response
1	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Level of Detail	To achieve program objectives, the Fish and Fish Habitat Follow-up Program was designed, as stated in the report, to determine baseline "conditions"/data for each of the "condition indicators". Overall, the document is a high-level overview. The program components do speak to each "condition indicator", how baseline data was collected (e.g., 2021), could be monitored, or will be monitored but lacks details. In many cases we are left wondering what specific method is being proposed to monitor a "condition indicator" (e.g., kokanee abundance) as multiple methods were proposed but not one of them has been selected or refined yet. This leads us to more questions than answers and less confidence after reading this Fish and Fish Habitat Follow-up Program. There has been some directed effort in 2021 to develop the methods for each "condition indicator" which has been informed by historical data, but the 2021 approach appears be a trail and error/experimental approach with no clear path forward yet on what will specifically be monitored for certain "condition indicators". While some experimentation is required to refine field methods to inform a program, the timeline for adequate baseline data collection is potentially drawing to an end. This baseline data is critical to evaluating project related effects is of high importance to CSFN. The Fish and Fish Habitat Follow-up Program provided essentially ticks an EA regulatory requirement box but does not provide sufficient detail or confidence in the data collected to date. Given the potential project related effects in Davidson Creek on downstream fisheries resources in CSFN's traditional territory, we are of the opinion that this Fish and Fish Habitat Follow-up Program is the first of many future engagements required to develop a technically feasible and statistically robust monitoring program. CSFN has not been engaged on baseline work conducted in 2021. We recommend 1) establish a technical committee to focus on the follow up program design; and 2) Artemis develop a detailed study design prior to commencing fieldwork in 2022 for review and comment that all parties agree too. The study design should include, but not limited to, power analysis of existing data as it relates to the indicators, refining the field and analysis methods.	Comment acknowledged, the 3.14 Follow-up Program document has been revised to address the issues outlined by the reviewer to the extent possible. Palmer has added and expanded on proposed methods to monitor the 'condition indicators' (e.g. Kokanee abundance, juvenile Rainbow Trout abundance), including field methods, data analysis and statistical methods. BW Gold is committed to engaging further with CSFNs to develop a technically feasible and statistically robust Follow-up monitoring program. Planning for the 2022 fisheries field programs, is currently getting underway, and BW Gold welcomes input from CSFNs on both this year's programs and the long-term follow-up program. Power analysis has been completed to inform the follow-up program design for the relevant indicators (i.e. YoY and juvenile Rainbow Trout abundance), this is provided in the revised 3.14 Follow-up Program document.
2	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.2 Rainbow Trout Overwintering Habitat Availability and Abundance	Absolute abundance of overwintering rainbow trout juveniles	Condition 3.14.2.2 states "absolute abundance of overwintering rainbow trout juveniles". The proposed methods in Section 2.2.2.2 of the Fish and Fish Habitat Follow-up Program will not address "absolute abundance". "Absolute abundance" would require mark-recapture or removal-depletion methods throughout overwintering habitats in Davidson Creek. This is not proposed in the methods. The methods proposed would address "relative abundance". We don't know who wrote that specific condition, but Artemis will not be in compliance with this condition as proposed in this Fish and Fish Habitat Follow-up Program. Determining absolute abundance of overwintering fish is technically very difficult, if not logistically impossible. We suggest a re-write of this condition.	BW Gold agrees with the reviewer that determining absolute abundance of overwintering fish is technically very difficult, if not logistically impossible. This issue was raised at a meeting with BW Gold, Palmer, IAAC and DFO on November 17, 2021. The regulators approve of the current approach of using relative abundance as a proxy for absolute abundance, and have indicated that a re-write of the condition is not required as long as the rationale for deviating from the exact language of the condition is documented. As described in the revised 3.14 Follow-up Program document (**Section 3.2.2**), the following two methods are proposed to assess juvenile Rainbow Trout overwintering abundance: 1.Mid-winter assessment of relative fish abundance using underwater cameras and evaluation of habitat characteristics at nine sites in Davidson Creek; and 2.Fall pre-overwintering and spring post-overwintering relative abundance surveys using three-pass electrofishing at five sites in Davidson Creek.
3	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.2 Rainbow Trout Overwintering Habitat Availability and Abundance	Drones - Overwintering	Recommend a drone survey in winter to identify open water habitats. Open water locations could be areas of groundwater influence and may direct sampling effort. A summer drone fight will not provide you with this information.	A drone survey of the lower reaches (1-6) of Davidson Creek was completed during the March 2022 winter field work, for this purpose.
4	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.2 Rainbow Trout Overwintering Habitat Availability and Abundance	Overwintering Effort - Abundance	Overwintering surveys require a high level of time and physical effort. Based upon our experience these surveys are informative in understanding the physical variables: timing of freeze up and thaw, areas that are ice free, areas of fish concentrations, snow thickness, ice thickness, water depth, etc. However, the ability to use overwintering fish abundance as a metric to statistically monitor over time will be challenging due to sampling limitations. We suggest revisiting your approach to determine abundance as a monitoring metric. Further discussions are required with CSFN to plan for the 2022 field season.	Comment acknowledged, BW Gold agrees that use of overwintering fish abundance as a metric to statistically monitor over time will be challenging due to sampling limitations. The revised 3.14 Follow-up Program document (**Section 3.2.2**) proposes two assessment methods for this metric, and we welcome input and further discussions with CSFNs on these methods. Fall pre-overwintering and spring post-overwintering relative abundance surveys using three-pass electrofishing at five sites in Davidson Creek is proposed in the revised document, in addition to a mid-winter assessement using underwater cameras.
5	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.1 Community Composition Davidson Creek Young-of-Year and Juvenile Rainbow Trout Abundance	Juvenile Fish Survey Effort	The proposed level of survey effort, number of sites (i.e., 3 sites) and spatial distribution, to monitor juvenile fish abundance is highly inadequate given our experience with other long term monitoring programs. We previously identified this concern during a review of the DFO Fisheries Offsetting Plan. Sampling fish abundance (i.e., density) typically has a high degree of variability. Research in streams has suggested that, because of high spatial variation in fish abundance, sampling a greater number of sites can provide adequate precision in an abundance estimate overall for a given duration (Schill and Griffith 1984; Slaney and Martin 1987; Hankin and Reeves 1988; Jones and Stockwell 1995; Decker et al. 1999). Stream fish populations are often highly clumped in their distribution because of spawning distribution (Beard and Carline 1991), geomorphic influences such as elevation, channel slope, and stream size (Kruse et al. 1997), habitat variability (Newman and Waters 1989), inter-cohort competition (Bohlin 1978), channel alterations (Elser 1968), or other factors" (Hagen 2010). Failure to account for these factors can result in bias in estimates of abundance and size at age structure for stream-dwelling juvenile fish. Further, "reach-wide abundance estimates will be biased or imprecise if the sampling method cannot be applied in the full range of habitat types that juveniles occupy or if only a small fraction of the total habitat can be sampled because the method is time consuming" (Korman et al. 2010) or ineffective (Hankin and Reeves 1988). Further refinement of the sampling design is required for this "condition indicator". Further discussions are required with CSFN to plan for the 2022 field season.	Comment acknowledged. In the revised 3.14 Follow-up Program document (**Section 3.2.1.1**), Palmer has increased the proposed number of sites to monitor juvenile Rainbow Trout abundance to 9, based on a power analysis (**Section 3.3.1.1**) of the existing (2011-2013, and 2021) data. Further discussion with CSFNs on the study design for this metric is welcome and will be facilitated through meetings as needed.
6	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.4 Data Analysis	Data Analysis	This section and all other sections titled "data analysis" do not provide details on how the data will be analyzed. We suggest lumping this text in with QA/QC section above and removing the section heading.	Comment acknowledged. Data analysis methods have been added in the revised 3.14 Follow-up Program document (**Section 3.3**) for each monitoring program.

7	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.1 Sampling Design	Sampling Design	This section and all other sections titled "sampling design" do not provide information on sampling design. The section is a repeat of the conditions. We suggest revising the section heading.	Comment acknowledged. Study design and sampling methods have been added in the revised 3.14 Follow-up Program document (**Section 3.2**).
8	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.1 Community Composition Davidson Creek Young-of-Year and Juvenile Rainbow Trout Abundance	Power Analysis	Power analysis of existing data is required to inform the future study design and sample sizes. Further discussions are required with CSFN to plan for the 2022 field season.	Please refer to the response to comment #5.
9	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.1 Community Composition Davidson Creek Young-of-Year and Juvenile Rainbow Trout Abundance	Growing Degree Days	Accumulated thermal units (ATU) calculations should be conducted using existing data to determine the variability of rainbow trout and kokanee fry emergence dates. The results from that analysis can be used to inform an appropriate juvenile sampling window. As presented, it is uncertain if fry (0+) are a reliable indicator of annual recruitment due the timing of emergence, timing of sampling, and capture efficiency. The time between adult spawning and juvenile sampling appears to be quite short. Based upon our experience with long-term monitoring studies, parr (1+ or older) have been used to indicate recruitment strength from the prior year because of issues related to the mis-match timing of emergence and selected juvenile sampling periods.	Comment acknowledged, in the revised 3.14 Follow-up Program document, Palmer proposes to confirm sampling timing for Rainbow Trout Young-of-Year (**Section 3.2.1.1**) and Kokanee fry outmigration sampling (**Section 3.2.3.3**) by calculating accumulated thermal units (ATU) using local stream and air temperature data. BW Gold is open to further discussion on how best to refine the appropriate sampling windows for fry emergence for both species. Of note is that Rainbow Trout spawning in Davidson Creek is wide-ranging both spatially and temporally, which means that fry emergence also occurs over a wide range. To address this, a high level of effort is proposed, with aim being to conduct sampling when the majority of fry have emerged but avoid infringing on the Kokanee spawning period. For Kokanee fry emergence timing, use of ATU calculations and literature review will provide a best estimate of timing emergence. However with more years of sampling, it is anticipated that understanding of inter-annual variability in emergence timing will be improved, and the sampling window can be refined in future sampling years. The program aims to sample all age classes, which will allow estimation of survival between age classes, and use of parr (1+ or older) to estimate recruitment strengh.
10	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Rainbow Trout Spawner Survey	Rainbow Trout Adult Abundance VS Redd Abundance	Why monitor adult abundance AND redd abundance? Adult abundance is the most useful, direct, and more precise indicator (i.e., fish traps). Redd abundance is not and subject to a high degree of error. We don't know who wrote the condition "Rainbow trout spawner and redd abundance (Condition 3.14.2.3)", but it should be revisited. Redd distribution would be a more appropriate indicator. Yes, you can get abundance information at the same time as the distribution survey, but it should be secondary to adult abundance. Focus on redds should be directed towards a specific project related effect (e.g., ISF transect monitoring) to ensure adequate depth and velocity for spawning and incubation throughout the years. Further discussions are required with CSFN to plan for the 2022 field season.	The primary reason to monitor both is that the condition, with which Artemis must comply, specifies both. BW Gold agrees with the reviewer's comment and further discussions can occur as requested.
11	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Rainbow Trout Spawner Survey	Rainbow Trout Drone Flights	Drones to identify Rainbow Trout spawning redds seems highly experimental. Based upon our experience Rainbow Trout redds are best identified through ground truthing given the nature of where they spawn. Further discussions are required with CSFN to plan for the 2022 field season.	The revised 3.14 Follow-up Program document no longer proposes use of a drone to detect redds. Section 3.2.3.1 proposes hoop net sampling and banks walks for Rainbow Trout Spawner Abundance. The bank walks will include redd counts. Further discussions can occur as requested.
12	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Rainbow Trout Spawner Survey	Rainbow Trout Maturity	No details were provided on approach for determining maturity. Further details on the proposed methods are required for this "condition indicator". Further discussions are required with CSFN to plan for the 2022 field season.	Details have been provided in the revised 3.14 Follow-up Program document (Section 3.2.3, introductory paragraph, and subsections 3.2.3.1 and 3.2.3.2). BW Gold welcomes CSFNs input on what is proposed in the aforementioned sections, and further discussions can occur as required.
13	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Kokanee Spawner Survey	Kokanee Maturity	No details were provided on approach for determining maturity. Further details on the proposed methods are required for this "condition indicator". Further discussions are required with CSFN to plan for the 2022 field season.	Please refer to the response to comment #12.

14	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Kokanee Spawner Survey	Kokanee Abundance VS Redds	Why propose 4 methods to obtain the same Kokanee abundance data (instream cameras, drone-based counts, and visual observation and redd counts)? Why not select one and implement a rigorous, precise, and defensible method? Adult abundance is the most useful, direct, and more precise indicator. Redd abundance is not and subject to a high degree of error. Not sure why the instream camera was considered "supplemental". This requires further discussion. Our previous experience with the VAKI Riverwatcher has been positive and provides precise estimates of abundance. Of course, most instream cameras are subject to turbidity concerns. Not sure if that is the case in this particular stream. Drones to identify kokanee adults seems highly experimental. Based upon our experience adults are best enumerated through ground truthing. We don't know who wrote the condition "kokanee spawner and redd abundance", but it should be revisited. Redd distribution would be a more appropriate indicator. Yes, you can get abundance information at the same time as the distribution survey but it should be secondary to adult abundance. Focus on redds should be directed towards a specific monitoring condition (e.g., ISF transect monitoring) to ensure adequate depth and velocity for spawning and incubation throughout the years. Further discussions are required with CSFN to plan for the 2022 field season.	The revised 3.14 Follow-up Program document no longer proposes use of a drone to detect redds and the methods proposed for monitoring Kokanee spawner abundance have been revised (**Section 3.2.3.2**). The use of mutliple methods is proposed in part to meet the condition requirements. BW Gold welcomes the reviewer's feedback on the updated methods and further discussions to agree on the best approach.
15	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Kokanee Spawner Survey	Kokanee Escapement Analysis	Visual assessment of kokanee spawners was identified as a method. However, not details were provided on analysis of this data. Will an area-under-the-curve approach be used to estimate abundance? If so, how will survey life and observer efficiency be determined? Further discussions are required with CSFN to plan for the 2022 field season.	Details have been provided in the revised 3.14 Follow-up Program document (**Section 3.3.3.2**) on analysis of Kokanee spawner data.
16	2022-01-24	Indigenous Communities	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Christopher Burns (LGL), Carrier Sekani First Nations (CSFN), Source Environmental Associates (SEA)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.2.2.3 Spawner Populations Davidson Creek Kokanee Spawner Survey	Underwater Camera	We are unaware how an underwater camera can be used to enumerate fry given the size of the fry and ability to actually observe and enumerate fry. This approach seems highly experimental.	Comment acknowledged, the revised 3.14 Follow-up Program document (**Section 3.2.3.3)** proposes a sub-sampling mark-recapture method using fine-mesh nets for monitoring Kokanee fry outmigration. We welcome the reviewer's feedback on the updated methods and further discussions to agree on the best approach.
16	2022-01-24	Indigenous Communities	Follow-up Programs	Christopher	Follow-up Programs	Section 2.2.2.3	Kokanee Weight	We are unsure how you will sample post spawn kokanee for accurate weights? They are typically in a state of decay and weights would not be reliable to develop a length-weight relationship for the	Comment acknowledged, in the revised 3.14 Follow-up Program document (**Section 3.2.3.2**), only measurement of fork and postorbital-
17	2022-01-24	Indigenous Communities	Follow-up Programs	Christopher	Follow-up Programs	Section 2.2.2.3	Groundwater	The groundwater monitoring program in relation to kokanee spawning areas lacks details. We recommend this be included in the suggested study design. Further discisssions are required with CSFN to plan	Comment acknowledged, the revised 3.14 Follow-up Program document does not include a groundwater monitoring program in relation to
18	2022-01-24	Indigenous Communities	Follow-up Programs	Christopher	Follow-up Programs	Section 2.2.2.3	Monitoring	At the end of this document, we are still left wondering what is the exact proposed frequency and duration (years from and to) for each program component. We don't know how many years Artemis is	A section (**3.4**) has been added to the revised 3.14 Follow-up Program document that provides information on proposed frequency and
19	2022-01-24	Indigenous Communities	Follow-up Programs	Christopher	Follow-up Programs	Section 4.	DS Condition	*DS Condition 2.12 requires: "The Proponent [BW Gold] will provide the draft annual report to Indigenous groups, no later than June 30 following the reporting year to which the annual report applies. BW*	BW Gold is open to discussing with CSFNs changing the timing for submission of the annual 3.14 Follow-up Program report for their review
1	27-Jan-22	Indigenous Communities	Schedule B Table	Al Irvine (New	Follow-up Programs	1.1 Purpose and	Fish and Fish	Overall this document lacks detail to a degree which is very concerning. Program components to meet the conditions for the environmental certificate are extremely important and obviously directly	The 3.14 Follow-up Program document has been revised to include more detail, and, where possible, the general measures requested by the
1	30-Jun-22	Indigenous Communities	Schedule B Table	Al Irvine (New	Follow-up Programs	1.1 Purpose and	Fish and Fish	This pertains to comment ID 1 from January 27, 2022. Although the document is vastly improved much more detail is still required for this document to provide sufficient baseline data, methodology	
2	27-Jan-22	Indigenous Communities	Schedule B Table	Al Irvine (New	Follow-up Programs	1.1 Purpose and	Fish and Fish	From the first section of the reviewed document - "The purpose of this Fish and Fish Habitat Follow-up Program is to determine the effectiveness of the mitigation measures to avoid adverse environmental	Comment noted - the introduction and purpose sections of the 3.14 Follow-up Program document have been revised accordingly.
3	27-Jan-22	Indigenous Communities	Vol 4 – Sec 5.5 –	Al Irvine (New	Follow-up Programs		Fish and Fish	Consider detailing mitigation measures within each major section of the program with summary tables including specifics of how the effectiveness of each measure will be assessed, thresholds for adaptive	The effectivenss of mitigation measures will be assessed, indirectly, through the monitoring of program components (e.g. fish community
3	30-Jun-22	Indigenous Communities	Vol 4 – Sec 5.5 –	Al Irvine (New	Follow-up Programs		Fish and Fish	This pertains to comment ID 3 from January 27, 2022. More detail on what the mitigation measures are is nessary to clarify how this program ties to the EA.	
4	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs		Quality	Section 2.1.3. and 2.2.3 Quality Assurance and Quality Control. These paragraphs provide very little information about what the Standard Operating Procedures (SOP) are. Consider referencing these SOPs	Comment acknowledged, these sections have been removed. QA/QC information will be provided in the annual reports for the Follow-up
5	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs		Data Analysis	Section 2.1.4 Data Analysis. Specify the "established and standardized methods" as well as the "cross-checking and validating" that is referred to. Consider including the descriptions of the analytical	Comment acknowledged, the Data Analysis section (**Section 3.3**) has been revised to be more specific with regards to analytical methods.
5	30-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs		Data Analysis	This pertains to comment ID 5 from January 27, 2022. Baseline data and detail on the numerous power analysis that were conducted needs to be provided within the document to support the premise that	
6	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2.2.1 Community	Fish and Fish	Page 11 of document - "Long-term abundance monitoring [young-of-year and juvenile rainbow trout abundance] will occur during each Project phase, with frequency to be determined for phase-specific	A section (**Section 3.4**) has been added to the revised 3.14 Follow-up Program document that provides information on proposed frequency
7	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.1 Condition	Fish and Fish	Consider providing maps showing environmental assessment sampling locations, 2021 field program locations and proposed sampling locations along with tables detailing UTMs, frequencies and methods	A map has been provided (**Figure 2** of the revised 3.14 Follow-up Program document). It shows the proposed sampling locations for the
8	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.1.3 & 2.2.3	Fish and Fish	Consider using table to detail data collection methods, data cleaning methodologies (ex. scripts in R or python stored in private GitHub repositories), data storage (ex. Postgres database) and made available	While a table has not been used, details on data collection and processing methods have been added to the revised 3.14 Follow-up Program
8	30-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.1.3 & 2.2.3	Fish and Fish	Data governance is an important component of industrial activities on traditional lands with a lack of transparency/access a key driver for mismanagement of ecosystem values baceasue the information	
9	27-Jan-22	Indigenous Communities	Appendix 5.1.2.6A	Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	Fish Habitat Assessment Procedures were conducted in the EA within small sections of Davidson Creek when compared to the amount of habitat available. Consider incorperating additional FHAP data	Habitat information will be collected as part of fish community (including abundance sampling), this is detailed in **Section 3.2** of the revised
9	30-Jun-22	Indigenous Communities	Appendix 5.1.2.6A	Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	RISC habitat data differs from FHAP data. We are interested in more detailed measurements such as the areas of pool, riffle, run habitat vs the width of the stream and the type of cover. Even better than	
10	27-Jan-22	Indigenous Communities	Appendix 5.1.2.6E	Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Fish and Fish	The risk of disruption to salmonid homing to Davidson Creek (RB and KO) has been documented as high. How will this program incorporate all available data to determine the magnitude of this impact	Although the Blackwater EA found the likelihood of some disruption to rainbow trout and kokanee homing to be high, the potential effect
10	30-Jun-22	Indigenous Communities	Appendix 5.1.2.6E	Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Fish and Fish	"Without controls it will be impossible to determine if the measurement endpoints are due to natural variation, environmental conditions at a scale larger than that influenced by the mine or due to the	
11	27-Jan-22	Indigenous Communities	Appendix 5.1.2.6E	Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Fish and Fish	Discussion of contingency options (homing mitigation) to ensure ongoing use of fish habitat should be mentioned in this document if not explicitly discussed (ex. adult or egg transfers should impact to	Please refer to response to IR#10 above.
11	30-Jun-22	Indigenous Communities	Appendix 5.1.2.6E	Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Fish and Fish	Contingency options should be discussed in the monitoring plan as well as here in this spreadsheet.	
12	27-Jan-22	Indigenous Communities	Appendix 5.1.2.6E	Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Fish and Fish	Consider including specific measures (comparison of pre-FFS to post-FFS installation spawners/young-of-year/juvenile) to measure and address the potential for decreases in spawning and overall	The follow-up monitoring program includes year over year comparison of monitoring metrics, including pre-FWSS and post-FWSS
13	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	A power analysis should be conducted to determine the number of sites required to obtain estimates of the variability between sites. Mark recapture methods should be detailed for absolute abundance	A power analysis has been performed to determine the number of monitoring sites required to provide adequate statistical power to detect
13	30-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	Mark recapture should be included in the sampling to determine sampling efficiency. All the stats in the world can't tell us how many fish are present but not captured if we do not measure sampling	
14	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	Consider the use of periphyton and benthic invertebrate sampling/analysis within this program (or explicit linking of this program to other programs) to assess changes in productivity and aquatic health	Periphyton and benthic invertebrate sampling is outside the scope of 3.14 Fisheries Follow-up Program. However both will be monitored as
14	30-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	It is not out of scope for the monitoring report to mention what was just communicated? ie. "The findings of other monitoring programs (e.g. AEMP, 3.15 Follow-up Program), including periphyton and	
15	27-Jan-22	Indigenous Communities	CEAA Technical	Al Irvine (New	Follow-up Programs	2.2 Condition	Fish and Fish	FWSS temperature modelling needs to be verified in the field to inform mitigation requirements (ex. freezing of pipeline, exceeding low temperatures that would affect rainbow/kokanee incubation	Verification of FWSS temperature modelling is outside the scope of the 3.14 Fisheries Follow-up Program. However the 3.15 Follow-up
16	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	1.4 Condition	Fish and Fish	Consider including the measures to maintain instream flow to Davidson Creek through the FSS and how notification will be given (within mine operations, to regulators and to UFN/LDN) if needs are not	Maintaining instream flow needs in Davidson Creek is a requirement of DS condition 3.8. Details on how the IFN will be maintained and how
16	30-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	1.4 Condition	Fish and Fish	Reference to the measures to maintain instream flow to Davidson Creek through the FSS and how notification will be given (within mine operations, to regulators and to UFN/LDN) if needs are not achieved	
17	27-Jan-22	Indigenous Communities	Appendix 5.1.2.6E	Al Irvine (New	Follow-up Programs	2.2.2.1 Community	Fish and Fish	"The [genetic] grouping of kokanee populations is not yet known." Consider including an evaluation of the reasons that this grouping was not identified during the environmental assessment, what level of	The revised 3.14 Follow-up Program document describes the study design for monitoring Rainbow Trout and Kokanee genetic structure and
18	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Rainbow Trout	Please specify if drone flights to identify rainbow trout spawning locations have and will collect individual photos to be stitched to orthomosaics or if the drones are collecting video only. Consider detailing	The revised 3.14 Follow-up Program document no longer proposes use of a drone to detect redds. Section 3.2.3.1 proposes hoop net
19	27-Jan-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Groundwater	If drone flights are planned anyway, consider the use of thermal imagery acquired from a drone to locate areas of warm water groundwater upwelling. Consider detailing how data will be stored and	The drone used for the March 2022 Rainbow Trout overwintering habitat survey (see Chris Burn's comment #3 and the response) does not
19	30-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	2.2.2.3 Spawner	Groundwater	A half degree change may be detectable (if a drone with thermal imnaging was used) and perhaps the areas where groundwater inflow was occurring were not identified because the method of detecting	
20	6-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	ALL	2021 Baseline Data	Baseline data from 2021 should be summarized in these reports so it can be determined if the methods proposed are likely to provide the data required to monitor what must be monitored to fullfill the	
21	6-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	ALL	Data Governance	A formal plan for data governance should be a part of tthis Plan. Within this "Data Governance Plan":	
22	6-Jun-22	Indigenous Communities		Al Irvine (New	Follow-up Programs	All monitoring components		for any of the follow up program components or any of the adaptive management triggers. Please include details of controls within this document.	

23	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Baseline data should be included to give the reader an idea of the scope of what is going on in the system. For example - how many kokannee are we expecting to spawn in Davidson Creek and what are our baseline numbers of fish/100m2 from historic juvi rb sampling? Very basic high level background info should be available iwithin the doc to reviewer and those using these monitoring plans.
24	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.1.1 Davidson Creek Young-of-Year and Juvenile Rainbow Trout Abundance and 3.2.2.2 Fall Pre-overwintering and Spring Post-overwintering Assessment	100 - 150m sites are very large and time consuming. Suggest more smaller closed sites (~100m2 sites selected randomly by GIS) with both single pass and multi-pass depletion combined with large (300m +) open sites and the documentation/tagging of each fish. In reaches that have channel widths greater than ~5m left and right bank surveys should be conducted and recorded seperately. Multipass depletion tends to overestimate densities because it assumes fish are equally easy to catch on each subsequent pass as the first, including mark recapture methods as well will give a much better idea of sampling efficiency and allow calibration of past work. Large open sites should be used for mark recapture and each fish ≧70mm should be tagged with a unique pit tag with the id recorded. As mark recapture assumes captured fish will be as easy to catch in subsequent passes as the first, sites should be resampled the following day. A UTM for each fish captured should be taken so that the sites can be split up using GIS and analyzed with statistics run in alternative scenarios after the fact. Running a time track on a gps and recording the time of capture works well. This will give a better indication of variability in density within the areas sampled (likely very large variability) and this will result in a far more robust dataset.
25	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.2.1 Mid-winter Assessment	"Overwintering habitat quality measurements" What are the methods used to collect this data? Are there transects and if so how is the location of the transect selected. Options for sites should be preselected randomly (ie. first choices, second choices, etc.) and there should be more than one transect at each site.
26	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.3.1 Rainbow Trout Spawner Abundance (subsection Bank Walk Visual Assessment)	"Bank walk spawner and redd surveys that encompass the entire migration and spawning period allows the use of an area-under-the-curve (AUC) estimate of Kokanee spawner abundance" Please specify the expected frequency of bank walks and over what time period within the text of the document.
27	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.3.2 Kokanee Spawner Abundance	please include the monitoring field card templates as appendices to the monitoring reports or - if the same format as AMEC is to be used, reference the digital results in their 2013 report appendices (Table 5.15-1A). This will make it much easier to understand what is being recorded, serves a dual function of communicating with field crews and allows replication of the work by others in the future.
28	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.3.2 Kokanee Spawner Abundance Spawner Survey	*"A value of observer efficiency (OE) will be applied to each reach on each day to account for negative bias associated with spatial/temporal changes in observability."* What is meant by "a value of observer efficiency"? Low, moderate or high? Please specify in the report.
29	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.3.2 Kokanee Spawner Abundance Tissue Sampling	*"Otolith samples will be opportunistically gathered for age analyses to determine the age ranges of Kokanee spawners. The proposed target minimum sample size for otoliths is n=100 samples"* 100 is a large number of samples and planning to get samples from carcasses may be unsuccessful (ie. bears eat the carcasses, otiliths are rotten and can't be analyzed, etc). Sexing dead fish can also be difficult due to deterioration. Suggest collecting otiliths from fish to be sampled using seine net pulls (or dip nets) from Davidson Creek. AMEC counted over 1500 fish in Reach 1 alone on their survey in 2013 (Aug 8) so harvesting of 30-60 fish over the multiple week program will not significantly impact the population. The methods for how to select the fish to be sampled should also be specified. The first hundred fish in the first section s during the first survey should not be sampled and a mix of male and female spawners will be required so this should be specified wihtin the text of this plan.

30	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.3 Data Analysis Site Selection Power Analysis		Table 3.9 - please include units for CPUE in the report. Also the data should be presented by life stage as well as aggregated. *"An ANOVA was completed for CPUE by year using the Sum of Squares value for year and residuals from the ANOVA to evaluate an effect size of 0.576"* - how was the distribution of this dataset tested for normality to determine that ANOVA is appropriate? The data from the ANOVA should accompany the text about the results.
31	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.4 Frequency and Duration		Plan is proposed to "*decrease sampling frequency by one year after each three-year period in which no effects are identified, to a minimum sampling frequency of once every three years*" - however, it is mentioned that we will need 5 years of data to detect a trend using the methods described so that would mean it could initially take a minimum of 7 years to detect a trend and 10 - 15 to be able to detect "trends" from year 3 on.... Too long. Too risky. Particulary if we are not able to get the results interpretated until after field surveys should have begun the following year.
32	6-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.4 Frequency and Duration		The raw and intepreted data from this monitoring program should also be published in a timely manner in a computer readable format that can be incorperated into Nation led data management systems. From the perspective of the reviewer, this is very much in the scope of this monitoring document as it facilitates the first steps for interprestation of the data through Nation led initiatives (if they wish to lead such initiatives) allowing adaptive management actions from the Nations themselves if they so desire.
	16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.12	Emma Cooke	Follow-up Programs for Condition 3.14	Section 3.2.2.2	General	"The pre- and post-winter overwintering survey measurement endpoints will include assessment of fish abundance and habitat suitability (table 3-4Table 3-1)" Need to correct reference.
	16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.13	Emma Cooke	Follow-up Programs for Condition 3.14	Section 3.3.1.1	Typo	"Population structures of fish will be assessed using length and wight frequency distributions and lengthweight regressions."
	16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 1.2 and 1.4	Content	While the majority of the content for section 1.3 has been adopted in other sections of the new document, sections 1.2 and 1.4 have been completely omitted, why? Paragraph describing location of Davidson Creek and water flow was helpful in explaining the function of the reservoir.
	16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2013	Section 1.1 Purpose and Objectives	General	Sentence: These indicators…during different phases…" Should say, "…during ALL phases…" to remove ambiguity and make sure no phase is overlooked. Also, suggest adding one more bullet: "d) determine if additional mitigations should be taken pursuant to Condition 2.9"
	16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2014	Section 2.2	Content	Section on methodology is a little thin. No mention of where the samples were taken (single site or multiple) or how many samples within each site and or frequency at which this method was repeated in order to achieve adequate samples. As per Phase 3 of RISC 2001, a plan is to be developed, can you share that plan (a map would also be helpful)
	16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2015	Section 2.4	Additional monitoring	Doing away with additional studies or monitoring doesn't allow changes to be tracked overtime. "Similar or poses minimal risk," does not mean it zero risk, therefor should be continuously monitored throughout project phases as stated in DS section 3.14. Also, should changes occur over time, what is the mitigation strategy?

16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2016	Section 3.1	Water quality	Previously mentioned was the need for temperature monitoring, as a follow up. Is there any cause for concern about pH changes with the introduction of lake water?
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2017	Section 3.2.1.3	typo/ambiguous	Para 4. "Adult, pre-spawn Kokanee will be sampled…, since Tatelkuz like likely…" should be, Tatelkuz Lake Para 7. Suggest removing "to the extent possible," at the end of first sentence; term is too ambiguous
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2018	Section 3.2.3	General	Para 1, line 3. "Large-scale…." can this be clarified... It is very hard to follow.
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2019	Section 3.2.3.1	Typos	Under heading "Bank Walk Assessment:" Bank walk survey also will be conducted the peak spawning period…" should read, " Bank was surveys will also be conducted during the peak spawning period…"
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2020	Section 3.2.3.1	Clarification	Para 2. Can you elaborate a bit on what site specific adjustments may be needed?
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2021	Section 3.2.3.2	typo	Tissue Sampling, para 3, last sentence. "Statistical tests will be performed on these data to estimate…". Should say "…on these data sets or this data…"
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2022	Section 3.2.3.3	typo	Para 2, line 4. "The duration of sampling period….". Should say, "The duration of the sampling period…."

16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2024	Section 3.3 Section 3.3.1.1	typo	Para 1, line 4 and 5. ..."will be completed to identify statistically differences...., or if the data are not normally distributed..." Should say, "...will be completed to identify statistical differences..., or if the data sets are not/or the data is not normally distributed..." Same issue in last paragraph, last sentence. "If the data are not normally..." Should be is not normally or the data sets are not normally
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2025	Section 3.3	Ambiguous	Last sentence of section. Suggest removing, "where appropriate."
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2026	Section 3.3.1.1	typo	last sentence of page. Used colon instead of semi-colon
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2027	Section 3.3.3.1	typo	Para 2, line 4. "...site, moving each direction." I think it should say moving in each direction but not sure. Please revise.
16-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2029	Section 3.3.3.2	General	Para 2, first sentence. Consider revising. Either a missing word or two or maybe missing punctation but doesn't make sense. Under Size at Maturity heading. Entire paragraph seems is difficult to understand. If the second sentence is in fact a different measurement than the first, then clarification is required.
17-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2030	Section 3.4	Typo	Para 3, line3. "...for at least the two years..." Should say, ".. For at least the first two years..."
18-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2031	Section 5	Typo	Para1, line2. "...changing conditions or development at the Project..." I think it's supposed to say OF the Project?

19-May-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Josee Trudeau	Follow-up Programs for Condition 3.14 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2032	Section 5.1	Typo	First paragraph has quotation marks around part of the sentence. Is something being referenced here? Also, immediately after quote I believe there is a missing word or punctuation. Please clarify.
30-Jun-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Brenley Yuan	Blackwater Gold Project Follow-up Programs for Condition 3.14	3.1 Background and Approach	Flow release	Please provide a summary of the IFN study including what flows are needed for each lifestage, time of year, species.
30-Jun-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Brenley Yuan	Blackwater Gold Project Follow-up Programs for Condition 3.14	3.1 Background and Approach	Flow release	Please provide the flow management plan that includes what flows are released throughout the year. In addition to meeting IFNs, flow releases need to mimic the natural flood regime, particularly the 2-year flood flow. For example, each spring, flow releases should mimic a freshet with the intensity similar to that of the natural 2-year flow. This flow is the channel-forming flow and influences many things including bankfull width, radius of curvature, and substrate size (relevant to spawning habitat). Freshet flows have a natural flushing effect that cleans out fine sediment from gravel. If there is not a sufficient flushing freshet flow released once a year, fine sediment will accumulate in the system which degrades spawning gravel. Furthermore, if a natural 2-year flow is not maintained, you will likely see channel instability in the lower reaches as the creek adjusts to its new regime.
30-Jun-22	Indigenous Communities	Blackwater Gold Project Follow-up Programs for Condition 3.14	Brenley Yuan	Blackwater Gold Project Follow-up Programs for Condition 3.14	3.1 Background and Approach	Flow release and spawning habitat	Due to potential effects of flow regime changes to bed substrate and flow conditions (both important to spawning habitat), monitoring should collect data on -substrate size and fine sediment % at redds -water depths and velocities at redds (enables calculation of the Froude number, a hydraulic condition for which salmonids select for) -substrate size and fine sediment % along the entire study area at set transects It is important to measure these parameters at both redds and along the creek in general because it represents what the fish are choosing vs. what is available.

Blackwater DS C 3.16 | FFHF - Tatelkuz Lake and Chedakuz Creek									
ADMIN	COMMENTS								
ID	Comment Date	Reviewer Agency	viewer Source D	Reviewer Name	Application Document	lication Section or P	Comment Theme	Comment	Response
1	01-Feb-22	Indigenous Communities	Schedule B Table Of Conditions For An Environmental Assessment Certificate	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Level of Detail	This comment echoes much of the LDN/UFN feedback for the program recently reviewed for condition 3.14 (Davidson Creek). Overall this document lacks detail to a degree which is very concerning. Program components to meet the conditions for the environmental certificate are extremely important and obviously directly related to the potential for the impact assessment to be accurate and signifcant impacts avoided and/or mitigated. This lack of detail is particularly concerning since baseline work for 2021 was collected according to this program, the window for collection of baseline data is small and the 2022 field season is near at hand. Much more detail is needed (revisions are necessary) and following revisions futher discussions are required with UFN and LDN to plan for the 2022 field season. Many of the comments in this early February review will be general in nature since this document will need to be revised significantly before we have enough information to review in detail. Of note, the following are general measures that should be considered to include within this and subsequent plans forwarded for review to UFN and LDN: * Unless there is a specific reason for not doing so consider including the plain language name of the program in the title of the document (i.e.. Fish and Fish Habitat Follow-up Program). This is helpful for understanding the purpose of the document and will allow easier cross referencing to other documents. * Consider including page numbers. *Consider explicitly stating the components of the environmental assessment that the plan will address and provide citations and references to these documents including URL links to the specific reports on the provincial Environmental Assessment Office (EPIC) site. If the documents are not available on the EPIC website for some reason consider following up with the appropriate parties to ensure they are uploaded and made available. It is important that this plan build on all the assessment work that has been done so that it may provide a road map to understand the impacts that are driving the follow-up program and to empower informed data collection, analysis and reporting. Referring to the "Environmental Impact Statement" (AMEC 2015) is not specific enough to provide this road map - Appendix identifiers, names of individual memorandums and URLs are also necessary. * If relevant information to inform this program is to be collected through additional programs consider explicitly stating the links to those other monitoring programs (citations) with references. * To increase the clarity of the program, consider organizing components into tables with sampling frequencies for each proposed component of the plan as well as for each phase (construction, operation, closure, post-closure) of the Project. * Consider drafting plans that address multiple conditions of approval together within single follow-up programs to group relevant schedules, data collection and analysis together. For example this program could be combined with a program to fulfill condition 3.15 (follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish	The purpose of the Condition 3.16 Memo is to provide a summary of the purpose and objectives of the monitoring, the methods being used to date, a summary of results to date, and the schedule for the implementation of long-term monitoring. More details for the monitoring methods and 2021 results have been added to this memo. Further discussion of the 2022 monitoring program methodology can occur with UFN and LDN as requested. The reviewers specific comments have been address in the memo, including: - Title revision not performed because it currently uses plain language and wholly describes the purpose of the memo - Addition of page numbers - Regarding explicitly addressing and citing sections in the environmental assessment (EA), one purpose of the follow-up programs is to address the conditions set in the federal Decision Statement, which has been done explicitly and cited, that requires verification of the accuracy of the EA. Information can be found in the Fish and Aquatic Resources 2011-2012 Baseline Report (Appendix 5.1.2.6A) on community composition (Section 5.10.1), overwintering habitat (Section 5.8.1.5) and spawner populations of rainbow trout (Section 5.10.2.3) and kokanee (Section 5.10.2.6) which have now been cited in the memo. - The memo refers several times to additional methods that may be developed, but does not refer to additional programs informing this follow-up program for Tatelkuz Lake and Chedakuz Creek. The planned monitoring programs for habitat compensation and offsetting currently are not planned for Davidson Creek. - Sections on sampling frequencies and duration have been added to the memo (Sections 2.3 and 4.4) - Condition 3.15 of the DS pertains only to monitoring water flows, water quality, and groundwater quality and quantity. While applicable to fish habitat, monitoring of these variables will be performed at single sites in each watershed. Therefore results will be too general compared to the level of detail required for specific fish habitats. - The general Conditions (Section 1.0 and 1.1) are cited in the memo and apply to all the follow-up programs. Specific instances when the general conditions are not being met, but will be in the future, have now been referenced.
1	21-Mar-23	Indigenous Communities	Schedule B Table Of Conditions For An Environmental Assessment Certificate	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Version B2 Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental	1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Level of Detail	As we all know, there a multiple components of this plan that are mentioned in the original comment that will need to be improved thorughout the evolution of this plan so that we will end up with the type of working document that will facilitate organization of project activites, ties to other programs and data collection to a level that will enable the plan to function as intended in the decision statement. As much back and forth will be required for this, we will close the comment here and transfer applicable line items to seperate issues for carrrying forward.	
2	01-Feb-22	Indigenous Communities	Schedule B Table Of Conditions For An Environmental Assessment Certificate	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Level of Detail	From the first section of the reviewed document - "The purpose of this Fish and Fish Habitat Follow-up Program is to determine the effectiveness of the mitigation measures to avoid adverse environmental effects on fish and fish habitat" The purpose of the Fish and Fish Habitat Follow-up Program is also to verify the accuracy of the environmental assessment. For this reason the predicted residual effects assessment of the project on fish and fish and fish habitat in Tatelkus Lake and Chedakuz Creek should be discussed in this plan includeing sources of uncertainty with strategies, schedules, adaptive management triggers/actions to "follow-up" on each element included.	This additional purpose has been specified elsewhere in the memo and had been added to the purpose statement in the first section.

2	21-Mar-23	Indigenous Communities	Schedule B Table Of Conditions For An Environmental Assessment Certificate	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B.2	1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Level of Detail	Great start. However, as an example of how this component of this plan needs improvement.... Nowhere in this plan does it state (as per Vol 4 - Sec 5.5 - Summary of Assessment of Environmental Effects Amec 2015 - https://www.projects.eao.gov.bc.ca/api/public/document/58868f9be036fb01057684e8/download/Vol%204%20-%20Sec%205.5%20-%20Summary%20of%20Assessment%20of%20Environmental%20Effects.pdf) that one of the predicted potential impacts of the pumping of water from Tatelkuz Lake to Davidson Creek is *"Reduction in littoral fish habitat of Tatelkuz lake (Rainbow Trout & Kokanee)"* because "*Likelihood is high that there will be reductions in the number of HU in the upper one metre of Tatelkuz Lake because pumping water from Tatelkuz Lake will reduce total volume compared to the non-pumping scenario".* Although, the adverse residual effects on fish were ranked as "Not Significant", this potential impact needs to be clearly stated in this document. A purpose of this plan is to verify the accuracy of this assessment, so - this - and all other potential impacts need to be stated in this plan with actions outlined how each of these impacts will measured. For this particular example, the quantity of habitat in the littoral zone needs to be measured now and throughout the life of the mine (or a defensible model created that illustrates how much habitat will be lost through pumping scenarios and how that loss of habitat will translate to RB, KO and brassy minnow habitat units. This is just an example of one of the impacts detailed in the Envrionmental Assessment process. It is important that ALL of the impacts determined are stated clearly in this plan with follow up actions planned and conducted to determine the degree of the impact alongside the validity of the assessment.	
3	01-Feb-22	Indigenous Communities	Vol 4 - Sec 5.5 - Summary of Assessment of Environmental Effects Schedule B Table Of Conditions For An Environmental Assessment Certificate - Condition 2.5	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Fish and Fish Habitat Follow-up Program - Level of Detail	Consider detailing mitigation measures within each major section of the program with summary tables including specifics of how the effectiveness of each measure will be assessed, thresholds for adaptive management, management responses should thresholds be exceeded, documentation and data sharing protocols. As you are likely aware, Vol 4 - Sec 5.5 - Summary of Assessment of Environmental Effects and Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment (ERM 2017) will be useful for this purpose and the December 2021 version of the "Wetland Management and Offsetting Plan" may provide some useful template sections/tables for the type of clear and concise communication required for effictive planning of a program such as this.	Measurement and assessment end points have been added for the metrics used for each monitoring program. Additionally, an adaptive management program, including a trigger-response program, has been added to the memo.
3	21-Mar-23	Indigenous Communities	Vol 4 - Sec 5.5 - Summary of Assessment of Environmental Effects Schedule B Table Of Conditions For An Environmental Assessment Certificate - Condition 2.5	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Fish and Fish Habitat Follow-up Program - Level of Detail	Although measurement and assessment endpoints have been included, the impacts they are meant to assess need to be stated and the metrics of evaluation need to be more specific so it is clear what impact is being measured and how exactly the analysis will be conducted. Measurement and assessment end points need to be refined much more so that they are specific to how they will to be applied to determine not only the accuracy of each element of the impact assessment but also to determine the effectiveness of mitigation and/or addition measures necessary. Additionally, reference sites will be required to facilitate the differentation between natural variability, spatial variability and impacts from the mine.	

4	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Quality Assurance and Quality Control	Section 2.1.3, 2.2.3, 2.3.3 Quality Assurance and Quality Control. These paragraphs provide very little information about what the Standard Operating Procedures (SOP) are. Consider referencing these SOPs specifically if documented elsewhere and if not document them within this document.	A summary of the methods used has been added to each monitoring program, along with citation of any applicable SOPs. The previous QA/QC procedure sections have been removed.
5	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Data Analysis	Section 2.1.4, 2.2.4, 2.3.4 Data Analysis. Specify the "established and standardized methods" as well as the "cross-checking and validating" that is referred to. Consider including the descriptions of the analytical methods, including relevant validation and QA/QC procedures and results so users of the program are ready to hit the ground running.	A summary of the methods used has been added to each monitoring program, along with citation of any applicable SOPs. The previous QA/QC procedure sections have been removed.
6	01-Feb-22	Indigenous Communities	Appendix 5.1.2.6B Fish and Aquatic Resources 2013 Baseline Report (Section 4.10 Littoral Fish Habitat of Tatelkuz Lake)	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Details of what the predicted residual effects of the project on fish and fish and fish habitat in Tatelkus Lake and Chedakuz Creek are should be discussed in this plan to give context and provide background what was expected to happen and about what mitigation was detailed in the assessement (ie. AMEC 2013 - Appendix 5.1.2.6B and AMEC 2015	The methods used for littoral transect assessments were similar to those used in the 2013 AMEC baseline report (subset of representative locations previously sampled, depth, substrate, and percent cover data collection on either side of anchor line, etc). This document reference has now been added to the memo, as well as a new map presenting the locations.

6	21-Mar-23	Indigenous Communities	Appendix 5.1.2.6B Fish and Aquatic Resources 2013 Baseline Report (Section 4.10 Littoral Fish Habitat of Tatelkuz Lake) Table 6.1-1. Significance of Residual Effects on Fish and Fish Habitat from ERM memorandum from September 26, 2017 With Subject: "Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment"	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	The details of the impact assessments that resulted in the Decision Statement Condition 3.16 are not extrenous information and this information needs to be clearly stated in this document. Nowhere in this plan does it state (as per Vol 4 - Sec 5.5 - Summary of Assessment of Environmental Effects Amec 2015 - https://www.projects.eao.gov.bc.ca/api/public/document/58868f9be036fb01057684e8/download/Vol%204%20-%20Sec%205.5%20-%20Summary%20of%20Assessment%20of%20Environmental%20Effects.pdf) that one of the predicted potential impacts of the pumping of water from Tatelkuz Lake to Davidson Creek is "Reduction in littoral fish habitat of Tatelkuz lake (Rainbow Trout & Kokanee)" because "Likelihood is high that there will be reductions in the number of HU in the upper one metre of Tatelkuz Lake because pumping water from Tatelkuz Lake will reduce total volume compared to the non-pumping scenario". Additionally, loss of water in the upper Creek 661 Watershed may impact the amount of littoral habitat available. Although, the adverse residual effects on fish were ranked as "Not Significant", this potential impact needs to be clearly stated in this document. A purpose of this plan is to verify the accuracy of this assessment, so - this - and all other potential impacts need to be stated in this plan with actions outlined how each of these impacts will measured. For this particular example, the quantity of habitat in the littoral zone (and an appropriate unimpacted reference site) needs to be measured during baseline years and throughout the life of the mine to monitor how much habitat will be lost through pumping scenarios and how that loss of habitat will translate to RB, KO and brassy minnow habitat units. Also "*Changes are certain to occur to the flow regime in Chedakuz Creek*". Although no physical effects on fish habitat are anticipated and impacts were assessed as "Not Significant" - the reviewer and all other users of this document should not need to go outside of this document to get this information. Please include details of the potential impact, the level of significance, confidence level, etc. and all mitigation measures in the next iteration of the plan. Please also reference specifics in the ERM memorandum from September 26, 2017 with Subject: "Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment"	
7	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Lake Levels	How will the lake water level be monitored? Where are/will the monitoring stations be and what will be the frequency of data collection? Consider referenceing the specific studies in the EA where the data was collected to determine our current state of knowledge with regard to the amount of littoral habitat. Why are the permanent benchmarks mentioned in the EA not included in this document? How will this program quantify the amount of littoral habitat available within the lake before and after operations of the FWSS begin? How will the number of habitat units for kokannee and rainbow trout be measured and extrapolated for littoral habitat so that the amount of habitat can be compared to baseline levels and verify the environmental assessment?	Lake levels (measured water surface elevation [WSE] in the EA) are being monitored through a parallel Aquatic Effects Monitoring Program (AEMP), results of which are currently being summarized and will be provided in a separate baseline data report. The AEMP has been cited, along with a methods summary and available results. The HEP assessment was not applied to potential littoral habitat losses in Tatelkuz Lake as part of the environmental assessment, as potential impacts were expected to be negligible. Littoral habitat has been assessed, and the methods used and results summary have been added to the memo.
7	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Version B2 Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Lake Levels	If "*Lake levels (measured water surface elevation [WSE] in the EA)" are being monitored through a parallel Aquatic Effects Monitoring Program" then:* please state this explicity in this document. This is extremely relevant information and the user of the document should be informed of this. As one of the purposes of this follow up program is to "*verify the accuracy of the environmental assessment"* the amount of littoral habitat available needs to be measured so that the assessment that the impacts were going to be "*negligible"* can be verified. A method of assessment needs to be derived and included in this document. Reference sites will be required to tease out impacts of mine activities from other influences (ie. climate).	
8	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Were beach seines dispatched by boat? What size were the seines and how large was the mesh? Having more details of the work conducted in 2021 including photos and resulting data will be helpful for understanding what was completed and whether it makes sense to continue with the same methods.	Beach seining was conduced from shore. A summary of all lake sampling methods has been added to the memo.
8	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Version B2 Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental	2.1.2.2 Littoral Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Although the methods from Macnaughton et al. 2019 are referenced the details of how the work is done and which equipment was used are not adequately summarized. Additionally, the document referenced is for Western Silvery Minnow which is a "*a habitat specialist that prefers medium to large prairie streams"* so the information regarding seineing is related to covering areas within river environments. Within this document, provide the methodology to a level of detail that will empower biologists and techincians to replicate this study in the field. Pleae confirm the exact specifications of the nets used including the length, height and mesh size. Explain how the net is deployed as it cannot be the same as the referenced document as that work is done in the Milk River since that is within a river environment and we are dealing with shoreline of a lake.	

9	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Fish and Fish Habitat Follow-up Program - Level of Detail	Map should show the location of hydrometric stations, proposed electrofishing sampling locations, 2021 field program locations and proposed sampling locations along with tables detailing UTMs, frequencies and methods for each Project and program specific phase.	The requested map showing sampling locations has been added to the memo. Sections on sampling frequencies and duration have been added to the memo (Sections 2.3 and 4.4)
9	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Fish and Fish Habitat Follow-up Program - Level of Detail	In order to provide the reader and the user of this plan all the relevant information please add the following to the map and issue all layers of this map (and all other figures) within a geopackage as a digital attachment to document: 1. Shoreline Habitat Types and Location of Transect Surveys in Tatelkuz Lake, 2013. This can be referenced in Figure 4.10-1 in AMEC 2013 - Appendix 5.1.2.6B Fish and Aquatic Resources 2013 Baseline Report. 2. Tatelkuz Lake Littoral bathymetry as per Figure 4.11-1 in AMEC 2013 - Appendix 5.1.2.6B Fish and Aquatic Resources 2013 Baseline Report. This is extremely relevant information as it gives an overview of where littoral habitat occurs as well as orients the Limnology sites within the context of lake depths.	
10	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.3 & 2.2.3 Quality Assurance and Quality Control	Fish and Fish Habitat Follow-up Program - Level of Detail	Consider using table to detail hydrometric data collection methods, data cleaning methodologies (ex. scripts in R or python stored in private GitHub repositories), data storage (ex. Postgres database) and details about how this data will be made available to UFN and LDN through measures such as application programming interfaces (APIs). Scheduling of data upload and data QA procedures should also be included or references to where it is detailed should be provided.	A summary of hydrometric data collection methods has been added to the text (Section 4.2.1) as well as a summary of results (Section 4.3.1). The previous Follow-up Program ha been replaced with an Adaptive Management section, including a follow-up progra, trigger response (Section 6). The detailed data requested currently is being analysed. Once the data base is complete it can be shared as requested, with the format to be decided on through discussions with UFN and LDN.
11		Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.2.1 Tatelkuz Lake Limnology	Fish and Fish Habitat Follow-up Program - Level of Detail	Are the vertical profile locations at sites that were sampled in the baseline work? Why are the IDs of the sites sampled not referenced along with the locations in a table? Sechi depth was not measured?	Water column profile information has been added to the memo, including methods and a summary of results (Section 2.2.1).
12	01-Feb-22	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.2 Chedakuz Creek Water Quality	Fish and Fish Habitat Follow-up Program - Level of Detail	ERM 2017 states "Project-related changes to nutrient concentrations have the potential to affect the aquatic resources (primary producers and benthic invertebrates) that contribute to fish prey, are anticipated to occur in Davidson Creek, Chedakuz Creek and Creek 661 due to seepage of water from the TSF. The threshold for potential residual effects was set to be an increase of 50% above baseline levels". How will assessment of this potential impact be assessed?	Chedakuz Creek water chemistry monitoring is being conducted through a parallel Aquatic Effects Monitoring Program (AEMP). The AEMP has been cited, along with a methods summary and any available results.
13	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Consider the use of periphyton and benthic invertebrate sampling/analysis within this program (or explicit linking of this program to other programs) to assess changes in productivity and aquatic health due to temperature modifications, infilling of substrates due to throttling of flow flushing events, water quality impacts, etc.	Lower trophic level assessments are being conducted through a parallel Aquatic Effects Monitoring Program (AEMP). The AEMP has been cited, along with a methods summary and any available results.
14	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Consider providing details of the methodology used for "habitat assessments" at the three sites in lower Chedakuz Creek. How long were the sites? Were standardized methods used? Minnow trapping is effective for presence/absence surveys of juvenile fish. How is minnow trapping expected to determine impacts on rainbow and kokannee from operation of the FWSS?	Chedakuz Creek habitat assessment methods have been added to the memo, along with available results. Minnow trapping is one of two tools that will be used to assess relative abundance of small/juvenilte fish to compare pre and post-FWSS conditions. The methods to be used to assess adult fish relative abundance are closed-site electrofishing at the same three sites and bank walk kokanee spawner surveys. These methods have been added to the memo (Section 4.2.3.1).

14	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Please describe a scenario where three 100m2 closed-site electrofishing site, some minnow traps and an FHAP in an impacted area only with no reference sites will provide enough data to determine if there are changes to relative abundance of rainbow trout and kokanee populations in a system the size of Chedakuz Creek?! There is not enough data to tell us anything. Seriously, please simulate the data that it will take to understand that the diversion of water from the lake to Davidson Creek and the loss of groundwater from Creek 661 is causing a change in community composition and abundance of the rainbow trout and kokannee populations and that it is not the result of population dynamics, predator prey relationships and natural variation. It is not possible! Please prove us wrong. This study needs to be redesigned to gather a reasonable amount of data to do what it is intended to do. Three tiny little electrofishing sites in this huge system and a spattering of minnowtraps will not tell us anything. Reviewing the data from 2022 indicates that there were 16 KO and 2 RB captured at CC-EF2. At the only other site where electrofishing was conducted there was 1 KO captured and 2 RB. This is not baseline data. This is some token sampling to meet a condition of permitting and is not acceptable. In 2023, a minimum of 12 sites should be RANDOMLY located in Chedakuz Creek both upstream and downstream of Davidson Creek. The area below Davidson Creek should be inventoried with FHAP and a reference area somewhere unimpacted by the mine such as in middle Chedakuz Creek should have another RANDOMLY selected 12 closed sites and be fully inventoried with FHAP. PIT tags should be inserted to all fish captured and 30 fish of each species per year should be killed so that age structure of the population can be understood. Mark recapture needs to be conducted to give an indication of observer efficiency. Snorkelling and/or seining should also be conducted. As per Condition 2.10 we are asking that you simulate the data from a scenario that will trigger the timely implementation of additional mitigation measures.	
15	01-Feb-22	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	ERM 2017 states "Monitoring of flows during the construction, operations and closure phases will be required to validate habitat model predictions and to assess whether adverse effects may occur at post-closure." Consider providing detail how this will be done within this plan.	Chedakuz Creek flow is being monitored through a parallel Aquatic Effects Monitoring Program (AEMP). The AEMP has been cited, along with a methods summary and any available results.
15	21-Mar-23	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants Canada Limited. September 26, 2017.	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	"in the ERM memorandum from September 26, 2017 with Subject: "Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment" references states that *"Streamflow in Chedakuz Creek was estimated to decrease from baseline conditions during Construction (52 L/s decrease from baseline; 2% reduction relative to baseline), early Operations (316 L/s decrease from baseline; 13% reduction relative to baseline), late Operations (182 L/s decrease from baseline; 7% reduction relative to baseline), Closure (317 L/s decrease from baseline; 13% reduction relative to baseline), and Post-Closure (37 L/s decrease from baseline; 1% reduction relative to baseline".* The reader and user of this plan should not need to go outside of this document to find this information. In fact, this particular summary reference as well as the sources that this information cited as being summarized from are not referenced in this document. Please include this detail in the report and provide the references to the 2017 memo as well as the source documents (included below). ERM. 2016b. Blackwater Gold Mine Project: Assessments of Effects Related to Project Changes. August 2016. Prepared for New Gold Inc. by ERM Consultants Canada Ltd.: Vancouver, B.C. KP. 2016. Blackwater Gold Project: Life of Mine Watershed Model Report. Prepared for New Gold Inc. by Knight Piésold Ltd. : Vancouver, B.C.	
16	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012			Including field form templates as part of these plans is a great way to keep things organized and inform the reader/user of the program as to the methodology.	Method summaries have been added for each monitoring program.

16	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012			The methodology provided does not provide the level of detail required to replicate this study or give assurance that all relevant data is going to be collected. Please include fieldform templates in a digital format so that we can collaborate on specifically what data will be collected and how.	
17	01-Feb-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Groundwater	Consider the use of thermal imagery acquired from a drone to locate areas of warm water groundwater upwelling in Chedakuz Creek and detailing how data will be cleaned, processed, stored and shared.	The drone being used for the Rainbow Trout overwintering habitat survey does not have thermal imaging. A drone overview flight will be conducted during the program to search for open water (and thus potential groundwater upwelling) locations on Chedakuz Creek. The separate hydrogelogy program will be much more comprehensive at identifying upward gradients and contribution of groundwater to the system.
37	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 1.3	General	This flow reduction will be mitigated in part via a FWSS that will pump water from Tatelkuz Lake to a freshwater storage reservoir adjacent to Reach 6 of Davidson Creek via a pipeline (-1). What is meant by (-1)?	Figure 1-1
38	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 2.1.1	General	Reference link for sampling frequency is broken (Error! Reference source not found.)	Repaired
39	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 2.1.2	General	Same as above comment - sampling frequency reference link is broken.	Repaired
40	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 2.1.2	General	The number of limnological stations will be reduced from four to one if no site effect from the 2021 data is observed; What will be considered a "site effect"? Which of the four locations will be kept?	Site effects would include significant differences in surface water chemical or physical conditions. The deepest station would be retained.
41	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Figure 2-2	General	The x-axis scales are different for each graph - makes it difficult to visually compare across sampling events.	Adjusted
42	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	page 11	General	Page 11 and 12 have weird formatting/spacing.	Repaired
43	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 2.2.2.2	Typo	"Unique habitat types and recorded habitat characteristics collected during the shoreline transects will be used to determine the total area and abundance (%) of these habit types to be used for long term monitoring." habitat*	Revised
44	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 3.2.1/3.2.2	General	Reference link for sampling frequency is broken (Error! Reference source not found.)	Repaired
45	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Table 3-2	General	Is Table 3-2 a duplicate of Table 2-3? Does it need to be provided twice?	The two tables are the same... Palmer will assess whether to keep both tables.
46	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 4.2.1 (and 3.2.1)	General	The Chedakuz Creek discharge endpoints will include stream depth and flow velocity to develop ratings curves (Table 2-21). Table 2-21 does not exist within this document.	Renumbered
47	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 4.2.3.2	General	One site will be located in each of the six reaches of Davidson Creek, as shown in Error! Reference source not found.. Broken reference link.	Repaired
48	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Scetion 4.2.3.2	General	Sampling will occur during in late July, during the period after Rainbow Trout YoY emergence and before the arrival of spawning Kokanee adults. YoY should be defined somewhere in text.	Revised
49	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 4.2.3.3	General	The summer fish inventory measurement endpoints will include an inventory of the fish community and fish health (Table 2-2). Is Table 2-2 the correct reference?	Revised
50	13-May-22	KES		Emma Cooke	Follow-up Programs for Condition 3.16	Section 4.3.3.3	General	A summary of the habitat metrics collected in 2021 is presented in Table 4-66. Table 4-66 does not exist in this document.	Revised
51	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Entire document	References	Throughout the entire document, Figure, Table and in text section references need to be revised. In addition to the specific instances mentioned above there are over 20 more. Specifically, check reference to Figure 2; often expressed as Figure 2-1. Check text for "ERROR! Reference source not found". Check end of section references to tables regarding endpoints.	Noted
52	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 1.1	Typos/ambiguous	Para 1, line 1. "The purpose of Fish and Fish Habitat…" should be, "The purpose of the Fish and Fish…" A similar issue occurs in Section 3.2.2 line 1. Para 2, line 1. the Fish and Fish habitat Follow-up Program is missing the, "Fish and" part. Para 2, line 3. Please specify which phases these programs will be monitoring. Using the term "different phases" is too ambiguous Para 2, line 4. "...(IFN) Davidson Creek..." should say "...(IFN) in Davidson Creek..."	Revised as necessary. This is an introduction, so program specifics are not included here.
53	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Entire document	Content	Sections pertaining to the year 6 schedule, when the start of the FWSS is expected to begin is concerning. The ambiguity of the wording leaves an opportunity for non-compliance should additional water be required for any reason prior to year 6. For the purpose of clarity, the year 6 timeline refences should be omitted from the document for a more precise phrase, suggesting "when or at the start of withdrawal of water from FWSS" or similar phase.	The use of the phrase 'Year 6' is specific to the design of the IFN and has been discussed and analyzed in several, extensively reviewed, documents and will be retained here.
54	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 2.1.1	Reference	Map (Figure 2) should be refenced at the end of first sentence Is reducing sample sites, if no detection occurs an SOP or best management practice? If not, why the reduction?	Revised
55	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 2.1.2,	Mapping	Refers to the number of littoral habitat sites that will be augmented in 2022 going up from 4 to 11 but only 5 are on the map	Check Figure 2.1 to ensure all sites are included
56	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 2.2.1	Typo	Para 2, last line. "…(using secchi depth) also will…" should be, "…will also…"	Revised

57	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Figure 2-2 Figure 4.1	General	Figures are very hard to read - out of focus	Noted
58	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Page 11-12	Formatting	Likely a page break was inserted by accident.	Revised
59	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Table 2-4	General	October dataset. DO 5.2-9.0 mg/L. Not 100% but the point lying at 5.2 looks like a temperature reading not a DO reading; also, why are the October temp reading so perfectly linear? Seems quite unlikely.	Points are correct. After stratification breaks down, temperatures are often very uniform throughout the water column.
60	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 3	Typo	Para 1, line 1. "…Monitoring Program during Operations will…" I think the word proposed is missing or perhaps a comma?	Text is accurate as is.
61	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 3	General	Para 1 - why are stakeholders giving advice on scientific methodology etc.?	Consultation and engagement is a required condition for development and ongoing implementation of environmental monitoring programs.
62	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 4.2.1	Mapping/clarification	First paragraph refers to a monitoring station IN Chedakuz Creek near the outlet of the lake but it's not on the map; subsequently it refers to a hydrology station which is on the map but this station in within the lake, not the creek. Please clarify wording to reflect actual station location.	Palmer to check all site locations in Figure 2.1
63	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 4.2.3.1	Clarification	first paragraph and list refer to 2021 surveys. In second paragraph and list, it states that 3 additional surveys will be added to the 2021 surveys but you list 5 surveys, four of which are new and one of which is the same as the 2021 survey with a few additional details. Please revise.	Revised
64	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 4.2.3.3	Reference	Is this section based on and SOP or best management practices or study that can be referenced?	References???
65	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 4.3.1	Typo	Para 1, line 4. "…starts in March and peaks in Mayor June…" ??? Mid June perhaps??	Revised
66	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Figure 4-1	Clarification	Why is there no data between mid March and the end of May and can we explain the anomalies in 2013 and 2016?	Palmer to expand text
66	21-Mar-23	KES		Mikayla Davis	Follow-up Programs for Condition 3.16	Figure 4-1	Clarification	Unclear how this comment has been addressed, please indicate what section has been expanded on.	
67	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Table 4-5	General	Explanations under table do not include the acronym BMC	Palmer to revise text
68	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Table 4-6	General	Stream Cover, WD and Undercut Banks state they are to be reported by percentage but they are recorded using the Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Site Card Field Guide recording procedures for cover.	Palmer to address comment
69	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 5	Grammar	the first sentence in section 5 is in the past tense at the beginning, "Follow-up Programs () were initiated…" but then goes on in the present. Makes for difficult reading.	Tex Revised
70	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 6.1	Grammar/typo	Para 1, line 1. Same question mentioned in 3.14 doc. Why the quotation marks, are we refencing something here? Punctuation is needed. Para 3, line 3. "…will be completed to identify statistically differences…" should be statistical. Para 6, line 2. "…can be controlled for to reduce..." Omit for.	Text Revised
71	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 6.1	Content	Last paragraph refers to what can be done should adverse or negative effects be realized and should those measures prove insufficient… My concern is, if there isn't a mitigation strategy in place prior to such an event during Operation, profit will win out over the environment. I would like to see more options for mitigation.	Noted
72	17-May-22	KES		Josee Trudeau	Follow-up Programs for Condition 3.16	Section 8	Grammar	Para 1 line 3. "…and Chedakuz Creek monitoring during all Project." Consider re-wording, perhaps to "during the life of the Project."	Text revised
73	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	ALL	2021 Baseline Data	Baseline data from 2021 should be summarized in these reports so it can be determined if the methods proposed are likely to provide the data required to monitor what must be monitored to fullfill the objectives of these programs. Reviewers are left trying to provide feedback half blind when there is data that can help provide context for these plans still locked away. This is putting the carriage before the horse and not a good use of anyones time.	This memo pertains only to Condition 3.16 and is, therefore, not a Baseline Report or an Annual Report and is not the place for a comprehensive summary of 2021 data. The requested 2021 data has been summarized in the Blackwater Gold Project Fish and Aquatic Resources 2021 Field Report (Palmer 2022).
74	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	ALL	Data Governance	A formal plan for data governance should be a part of this Plan. Within this "Data Governance Plan": In all situations where it is possible, the raw unprocessed data itself for all components of the annual reporting should be published to the nations as soon as is possible (preferably in real time through online APIs for any data that can be collected with sensors and documented real time such as water temperature/turbidity/pH, hydrometric stage, groundwater level, atmospheric conditions) - even before data interpretation is done so that data integrity can be assessed and interpretation of key information can be completed by the Nations themselves if they see fit. The time lag between data collection, interpretation, publishing and potential management interventions is too long and is not necessary in this day and age for many study components. Laboratories used for analysis of parameters such as water quality, invertebrate taxonomy, fish tissue sampling, should include Nation representatives in distribution lists and within data access portals when data results are available. Digital field data collection methods should be developed for all components of the program as is possible with upload of manually collected data occurring through application programming interfaces to databases immediately after collection (or real-time during collection). The data forms and receiving database architectures should be designed in consultation with and shared openly with the Nations.	Request acknowledged. Further discussions between BW Gold and the Nations are proposed to establish an acceptable data governance plan. BW Gold has committed to developing an open-data portal and sharing data results, post-field memorandums, and field reports via file-sharing system. This file-sharing system is currently being developed and details will be shared when available.

74	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	ALL	Data Governance	Data governance is a core issue related to consultation and collaboration with UFN and LDN. It is not acceptable that the data is treated as some sort of proprietary product that can be shared when it is convient and in a format of the proponents consultants choosing. The digital versions of the data are the keys to understanding what is happening in this study and every other study related to this project and so the lack of a clear plan on how it is kept, as well as when, how and where it is shared is unacceptable. Raw data needs to be shared with the Nations in a timely manner in a format that is complete including such fields as the coordinates of sites with IDs that link historic sites to current sites. Data needs to be kept digitally in one database vs. random excel files that are segregated based on program. A centralized database is necessary so that the larger story of what is happening in the study area can be understood and communicated. Additionally, the data collected needs to be informed by and feed into larger systems of data governance such as government and academic databases. Please provide a table for each data parameter collected related to this Program that includes details of column_name, description, units, formats for it to be stored in, locations of government/academic databases that it will uploaded to, timelines for release to First Nations and method of sharing, etc. This is not just some minor detail. It is a major deficiency in all the components of every program related to this project. Data needs to be organized and shared in a manner that is transparent and logical.	
75	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	ALL	Fish and Fish Habitat Follow-up Program - Level of Detail	Plan is proposed to "decrease sampling frequency by one year after each three-year period in which no effects are identified, to a minimum sampling frequency of once every three years" - however, it is mentioned that we will need 5 years of data to detect a trend using the methods described so that would mean it could initially take a minimum of 7 years to detect a trend and 10 - 15 to be able to detect "trends" from year 3 on.... Too long. Too risky. Particulary if we are not able to get the results interpretated until after field surveys should have begun the following year. We suggest annual sampling.	The proposal to reduce frequency has been removed. Monitoring will be conducted annually for the duration of Operations. The frequency of monitoring in Closure and Post-Closure may be adjusted, depending on the results of monitoring during Operations.
76	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	ALL	Fish and Fish Habitat Follow-up Program - Level of Detail	Control sites will be necessary to determine if changes in metrics is likely attributable to works related to the mine or environmental conditions at a broader geographical scale. Controls are not measured for any of the follow up program components or any of the adaptive management triggers. Please include details of controls within this document.	Conditions 3.16.1, 3.16.2, and 3.16.3 of the Decision Statement do not require use of control stations. These conditions simply state the monitoring requirements for Tatelkuz Lake and Chedakuz Creek, which have been followed. Any changes in the required metrics will be evaluated against baseline conditions assessed during the Application/EIS and in 2021 to 2022.
76	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	ALL	Fish and Fish Habitat Follow-up Program - Level of Detail	To achieve all objectives of the Fish and Fish Habitat Follow-up Program it must be determined if variation from non-impacted conditions is occuring. In order to do that reference site conditions need to be included in the study. If Chedakuz Creek has extremely low flows due to a three year drought will that trigger a re-thinking of the pumping rates from Tatelkuz Lake or will that trigger a comparison of flows in the system with other systems? Please demonstrate with simulated data scenarios of when this program can determine if variation from "baseline" conditions is the result of mine activities or the result of natural variation, population dynamics and spatial variation. As per Condition 2.10 - please describe simulted data scenarios that trigger response mitigation (including additional habitat compensation) beyond what was planned through the Environmental Assessment.	

77	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.1 Tatelkuz Lake Limnology	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	"The 2021 data from the four sites will be statistically compared for a 'site' effect using a single-factor Analysis of variance (ANOVA) and Tukey's post-hoc comparison, or an equivalent non-parametric test. If no difference is detected the limnology sampling will be reduced to a single sampling site." Which parameters are to be tested for the 'site' effect? If a 'difference' in any two parameters (ex. ice thckness) at any of the 4 sites sampled sites within the 4 sampling periods (i.e., spring, summer, fall, winter) are all sites to be sampled in 2022. This would assume that conditions in 2021 are equivalent to conditions in all other years and creates a massive risk of insufficient data collection throughout the program. Just because a particular statistical test cannot prove to an arbitrary confidence level that results came from different sites, this does not mean that we should not be sampling a variety of locations in the lake which is 910ha in size. Once the operation is running, impacts of the Project will be unevenly distributed throughout the lake so without variation we will be left with very little information to understand what is occuring. Please consider revising to keep multiple sites.	The reduction from 4 sites to 1 site refers specifically to the depth profiles for the lake. Normally, a central monitoring station is established at the deepest point in each basin of a lake, so Tatelkuz Lake with only one large basin only requires one station. The purpose of originally locating and monitoring 4 stations is to determine if there was any spatial variability within the lake, considering its 9 km length. If monitoring indicates a lack of spatial variability, then one central site will be located moving forward.
78	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	"As stated in Condition 2.9, an additional purpose of this program is to verify the accuracy of the environmental assessment. Verification will be accomplished by comparing monitoring results with original baseline results." This statement indicates an overarching issue with this program becasue it assumes that the baseline dataset is robust enough and it's results persistent enough to use as a reliable baseline to compare future conditions to using only a bare-bones sampling program and no control sites. Control sites will be necessary to address the influence of natural variation and the larger scale biotic/abiotic factors that drive the systems. This monitoring program needs to be flexible enough to follow up on the accuracy of the environmental assessment by effectively monitoring conditions in the ecosystems throughout the Tatelkuz Lake and Chedakuz Creek area. Comparison of results with original baseline results on its own will not effectively do this. New dataset structures, sampling methodologies and trend indicators will likely need to be developed over the next 60 years and an adaptive managment approach should be recognized as an integral part of the program here in the introduction. Please revise.	It is not possible to find Control sites in the Tatelkuz Lake and Chedakuz Creek area for the following two reasons. First, there are no other lakes of the same size, depth, and configuration as Tatelkuz Lakes to compare it against. Second, the entire area is affected by logging, ranching, and other activities. These activities are different for each watershed. Therefore, any Control:Impact comparison would be confounded by the variable industrial activity amongst the watersheds. Due to these constraints, the analysis will be necessarily adaptive, relying on statistics to identify significant differences and temporal trends, but relying on intersubjective interpretation of the analyses to ascribe cause and potential mitigation, if required.
79	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.1 Tatelkuz Lake Limnology	Fish and Fish Habitat Follow-up Program - Level of Detail	The inclusion of the map (Figure 2) and Table 2-1 detailing the sampling sites is an improvement over past versions of this document. Thank you. Please label the sites on the map so that reviewers and users of this plan are able to link the information in the table and the figure most effectively.	Figure 2-1 has been revised according to the requested changes.
80	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.1 Tatelkuz Lake Limnology Figure 2-2. Depth vs Temperature (C) and Dissolved Oxygen (mg/L)	Fish and Fish Habitat Follow-up Program - Level of Detail	This figure is very difficult to read as well as interpret. To improve, the Y-axis should be flipped with the depths dropping from the surface, the scales of the X-axis should be equivalent for all four plots and the quality of the image improved (increase DPI).	Figure 2-2 has been revised according to the requested changes.

81	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.2.2 Tatelkuz Lake Littoral Habitat Assessment	Fish and Fish Habitat Follow-up Program - Level of Detail	Suggest adding addition transect site locations to sample habitat in a proportion relative to the % of total littoral area comprised by those types (as per AMEC 2013). For example, AMEC reports that Fg-NV covers 35.5% of the area of littoral area where as Cb-SV covers less than 0.1%. Sampling these habitat types with the same effort when one comprises and estimated more than 400 times as much area is not appropriate. Also, please consider explicidly tying habitat types to lacusrine habitat Suitability Index of Brassy Minnow within this planning report and then planning survey effort in a way that will ensure the most valuable habitats are monitored with a rigor suitable to monitor impacts to these areas. Control sites need to be established to determine if changes in habitat type are likely related to the mine or the result of other unrelated biotic and or abiotic factors.	The approach used by AMEC (2013) was to randomly select transect locations within each habitat type with more transects completed in more abundant habitat types. This random selection, and increased sampling in abundant habitat types was meant to produce habitat data representative of the entire littoral habitat of the lake, not to describe the habitat as is the goal for this long-term monitoring plan. This more targeted monitoring is designed to determine whether: 1) any changes occur over time to the littoral habitat at the selected monitoring locations; 2) whether one of several habitat types is uniquely affected; and 3) to relate habitat type (and potentially suitability) to Brassy Minnow abundance and, if applicable, changes in both of those over time. Suitability Index for Brassy Minnow is included in Section 2.2.2.2. Control sites are not possible for this monitoring program (see IR42 above).
81	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	2.2.2.2 Tatelkuz Lake Littoral Habitat Assessment	Fish and Fish Habitat Follow-up Program - Level of Detail	In order to monitor the littoral zone of Tatelkuz Lake most effectively, habitat data representative of the entire littoral habitat of the lake should be produced. As the above answer pointed out - to produce habitat data representative of the enitre littoral habiat of the lake, transects should be selected randomly with increased sampling in abundant habitat types. Change at discrete locations of the littoral area is not consequential if overall the amount and quality of littoral habitat throughout the lake does not change. Similiarly, it is not that important that the habitat at a discrete transect has changed significantly if overall the littoral habitat within that type is very similiar to baseline conditions and does not appear impacted negativey by mine activities. As per Condition 2.10 - please describe simulted littoral habitat/fish data scenarios that are just beyond the thresholds required to trigger response mitigation (including additional habitat compensation) beyond what was planned through the Environmental Assessment.	
82	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.2 Littoral Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Although, "Brassy Minnow sampling" is mentioned, there apears to be no discussion about the monitoring of fish populations for this component of the program. Please revise.	Text revised to include fish sampling and data analysis.
83	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.3 Frequency and Duration	Fish and Fish Habitat Follow-up Program - Level of Detail	The monitoring program needs to run continually for a minimum of five years consecutively in order to be able to detect trends. This program is intended to monitor what is happening and detect impacts. The program does not need to be scaled way back just because of the interpretation of a select few statistical tests on a very small dataset.	The proposal to reduce frequency has been removed. Monitoring will be conducted annually for the duration of Operations. The frequency of monitoring in Closure and Post-Closure may be adjusted, depending on the results of monitoring during Operations.

84	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.1 Chedakuz Creek Discharge	Fish and Fish Habitat Follow-up Program - Level of Detail	Hydrometric station data should be standardized to a format compatable with data sourced from Hydat Canada. This will facilitate friction free analysis for UFN/LDN/Nazko through standardized tools such as fasstr (https://github.com/bcgov/fasstr) and allow incorperation into larger datasets to help understand hydrological processes in the watershed and make management decisions related to the mine (and other issues of within the territories) in the context of ongoing climate change. Please confirm that this will be done within the report.	Hydrometric data will be provided in a consistent, industry-standard manner so that it can be easily integrated into common analytical workflows using R or other similar tools, including the fasstr package. This commitment has been added to Section 4.2.1 Chedakuz Creek Discharge.
85	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	All	Fish and Fish Habitat Follow-up Program - Level of Detail	The "Measurement and Assessment Endpoints" are ambiguous and there is no explanation of how they will be applied to the program. Were these tables meant to include specific triggers that will result in management interventions including revisiting of mitigation measures. The table should be explained in the text of the report with specific triggers identified in the table if that is the intent. If these are meant to summarize methods to be used, sections regarding specific (numeric if possble) management intervention triggers related to the "assessment endpoints" should be added.	Section 6.1 Follow-up Program Trigger Response lays out the general triggers and responses that will be used for each of the assessment endpoints measured for each survey of the 3.16.2 and 3.16.3 follow-up programs. As stated in Section 6 Adaptive Management, these triggers and responses can be further refined in consultation with the Nations.
85	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	All	Fish and Fish Habitat Follow-up Program - Level of Detail	As per Condition 2.10 of the Decision Statement - please provide simulated data to demonstrate examples of how the "Measurement and Assessment Endpoints" can be used to provide an early-warning system, allowing sufficient time to investigate root causes, increase monitoring, and take preventative action.	
86	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.3.1 Field Methods - Overview	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	Relative abundance cannot be determined with minnowtrapping. Snorkel surveys are more appropriate for a larger system such as Chedakuz Creek where adult fish will escape electrofishing.	To estimate relative abundance, closed-site 3-pass backpack electrofishing will be performed with block nets at the three habitat assessment locations, as described in Section 4.2.3.1 Field Methods - Overview and Section 4.2.3.2 Field Methods - Summer Fish and Fish Habitat. This method will reduce the ability of fish to escape eletrofishing and allow an accurate estimate of relative abundance. This method will be far more effective than snorkelling surveys that are likely to miss fish in large streams and cannot measure fish or take aging structures. The term relative abundance has been removed from the minnow trap method statement.

86	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	4.2.3.1 Field Methods - Overview	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	Review of data from 2022 indicates that there are very few kokanee and rainbow trout collected through electrofishing at the two sites samples. Incorperating snorkel assessments with multiple snorkelers set up in lanes can be an effective way to count adult fish. This program can be augmented by electrofishing at a reasonable number of sites (12) within impacted and reference areas to allow the aquisition of aging structures. As per Condition 2.10 - please describe simulted data scenarios that will trigger response mitigation (including additional habitat compensation) beyond what was planned through the Environmental Assessment.	
87	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.3.2 Field Methods – Summer Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	Some sort of mark recaptured is required to effectively calibrate capture efficiency. 100 - 150m sites are very large and time consuming. Suggest more smaller closed sites (~100m2 sites selected randomly by GIS) with both single pass and multi-pass depletion combined with large (300m +) open sites and the documentation/tagging of each fish. In reaches that have channel widths greater than ~5m left and right bank surveys should be conducted and recorded seperately. Multipass depletion tends to overestimate densities because it assumes fish are equally easy to catch on each subsequent pass as the first, including mark recapture methods as well will give a much better idea of sampling efficiency and allow calibration of past work. Large open sites should be used for mark recapture and each fish ≧70mm should be tagged with a unique pit tag with the id recorded. As mark recapture assumes captured fish will be as easy to catch in subsequent passes as the first, sites should be resampled the following day. A UTM for each fish captured should be taken so that the sites can be split up using GIS and analyzed with statistics run in alternative scenarios after the fact. Running a time track on a gps and recording the time of capture works well. This will give a better indication of variability in density within the areas sampled (likely very large variability) and this will result in a far more robust dataset.	The proposed closed-site 3-pass depletion electrofishing is the standard method for estimating relative abundance for a stream. The 100 m length value has been replaced with a more achievable 100 m^2 area value. The use of the proposed small closed sites combined with separate large open-site mark-recapture would actually take much more time and effort than the planned, standard method. The second proposed method, mark and recapture, was piloted on Davidson Creek in July 2022. Preliminary results indicate that the channel conditions in Davidson Creek limit the effectiveness of open site mark-recapture methods. Therefore, it is likely that results will be similar in the larger, lower Chedakuz Creek. Final results of a second August survey for the pilot program will be used to evaluate the feasibility of the mark-recapture approach for inclusion in the 3.16 Follow-up Program.
87	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	4.2.3.2 Field Methods – Summer Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	Above comment stands. Far more than three electrofishing sites will be required to understand this system and mark recapture work is necessary. Please demonstrate what data will need to be collected for the next 5 years to fullfilll the intent of this condition of the Decision statement. As per Condition 2.10 - please describe simulted fish and fish habitat data scenarios that are just beyond the thresholds required to trigger mitigation (including additional habitat compensation) beyond what was planned through the Environmental Assessment.	
89	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.3.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	The minnow traps do not appear to be capturing rainbow or kokannee. As such, this is not a reliable method for measureing population structure or condition for these species.	In 2022, additional closed-site 3-pass backpack electrofishing will be performed with block nets at the three habitat assessment locations, as described in Section 4.2.3.1 Field Methods - Overview and Section 4.2.3.2 Field Methods - Summer Fish and Fish Habitat. This method was added to collect Rainbow Trout and Kokanee to establish a more reliable method for estimating relative abundance and condition, and will be re-evaluated if needed. The Kokanee spawner survey also targets Kokanee while they occupy Chedakuz Creek during a key life stage.

88	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.3.2 Field Methods – Summer Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	since it has been over 10 years since the Fish Habitat Asssessment Procedures (FHAP) were competed by AMEC with another 5 years till this portion of the program is scheduled to begin, an FHAP should be re-done so we have a reliable baseline to work from. Reconnaissance methods will not provide enough information to understand if there are significant changes in morphology 10 years from program intiiation (~25 years from when the last FHAP assessment was conducted).	FHAP Level 1 survey has been added in place of the three 1:20,000 Reconnaisance sites. FHAP will be completed from the outlet of Tatelkuz Lake to Chedakuz Creek's confluence with Davidson Creek. This change has been made in Section 4.2.3.2 Field Methods - Summer Fish and Fish Habitat, and has been edited in Table 4-3 Measurement and Assessment End Points for the Chedakuz Creek Summer Fish Assessment.
90	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	6.1 Follow-Up Program Trigger Response	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	"Changes in the monitoring metrics for fish populations (e.g., fish abundance and spawner escapement), may reflect natural variability and it is challenging to pinpoint whether a significant change is attributable to mine activities (namely, water withdrawal by the from Tatelkuz Lake)." and "Statistical analyses will be used to evaluate changes over time. Analyses will allow for between-year comparisons and longer-term trend analysis. Between-year comparison (i.e., paired comparison between two separate annual datasets) will be completed to identify statistically differences in mean values. In addition, year over year change will be assessed qualitatively, by comparing with the baseline data." The logic of these two paragraphs are contradictory. Statistically testing if differences in means are "significant" does not rule out natural variation. The incorperation of controls into the program will help to determine if "significant" changes are out of the range of natural variation.	It is not possible to find Control sites in the Tatelkuz Lake and Chedakuz Lake area for the following two reasons. First, there are no other lakes of the same size, depth, and configuration as Tatelkuz Lakes to compare it against. Second, the entire area is affected by logging, ranching, and other activities... and these activities are different for each watershed. Therefore, any Control:Impact comparison would be confounded by the variable industrial activity amongst the watersheds. Due to these constraints, the analysis will be necessarily adaptive, relying on statistics to identify significant differences and temporal trends, but relying on intersubjective interpretation of the analyses to ascribe cause and potential mitigation, if required.
90	21-Mar-23	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	6.1 Follow-Up Program Trigger Response	Fish and Fish Habitat Follow-up Program - Monitoring Program Quality	Please consult with a statistician specializing in Bayesian modelling. It is possible to use data from other sites to determine if the changes in monitoring metrics for fish populations are likely attributable to mine activities or natural variability. This type of analysis is happening in other regions where mines are present (Elk Valley) and needs to happen here. Modelling of how the system is functioning and testing of the assumptions of those models is necessary to understand what is happening and outside data needs to be incorperated into this study so that data collected within potentially impacted areas it is not in a useless silo. It is not an option to accept that the impacts of the mine on this system can only be determined by "intersubjective interpretation" without robust datasets that tie variation in this system to natural variation and climatic influence by referencing conditions in other systems in the region. Although there will always be confounding factors for comparisons form one place to the next, there are ways to tease out causation and comparisons from sites outside of areas impacted by the exact same influence (ie. the mine) are necessary to give context to what is happening. As per Condition 2.10 - please describe simulted fish and fish habitat data scenarios that are just beyond the thresholds required to trigger mitigation (including additional habitat compensation) beyond what was planned through the Environmental Assessment.	
91	09-Jun-22	Indigenous Communities	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	ALL		The raw and intepreted data from this monitoring program should also be published in a timely manner in a computer readable format that can be incorperated into Nation led data management systems. From the perspective of the reviewer, this is very much in the scope of this monitoring document as it facilitates the first steps for interprestation of the data through Nation led initiatives (if they wish to lead such initiatives) allowing adaptive management actions from the Nations themselves if they so desire.	The requested 2021 data are presented in the Blackwater Gold Project Fish and Aquatic Resources 2021 Field Report (Palmer 2022). Sharing of these data in a digital format can be discussed further by BW Gold and the Nations.
92	30-Jun-22	Indigenous Communities	Schedule B Table Of Conditions For An Environmental Assessment Certificate	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	1.1 Purpose and Objectives	Fish and Fish Habitat Follow-up Program - Level of Detail	Although the document is vastly improved much more detail is still required for this document to provide sufficient baseline data, methodology specifics and monitoring/trigger methodology justification to be sufficient to fullfill requirements of the EA condition.	This memo pertains only to Condition 3.16 and is, therefore, not a Baseline Report or an Annual Report and is not the place for a comprehensive summary of 2021 data. The requested 2021 data has been summarized in the Blackwater Gold Project Fish and Aquatic Resources 2021 Field Report (Palmer 2022). Section 6.1 Follow-up Program Trigger Response lays out the general triggers and responses that will be used for each of the assessment endpoints measured for each survey of the 3.16.2 and 3.16.3 follow-up programs. As stated in Section 6 Adaptive Management, these triggers and responses can be further refined in consultation with the Nations.

93	30-Jun-22	Indigenous Communities	Vol 4 - Sec 5.5 - Summary of Assessment of Environmental Effects Schedule B Table Of Conditions For An Environmental Assessment Certificate - Condition 2.5	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Fish and Fish Habitat Follow-up Program - Level of Detail	More detail on what the mitigation measures are is nessesary to clarify how this program will assess the accuracy of the EA and infom adaptive management.	Section 1.1 Purpose and Objectives describes the main mitigation measure proposed in the Application/EIS for loss of water in Davidson Creek, the freshwater supply system (FWSS). Claryfying language has been added to make sure this information is explicit. This section also describes the baseline conditions being assessed: fish habitat quantity and quality surveys in the Tatelkuz Lake littoral zone [Condition 3.16.1]; the Tatelkuz Lake littoral zone [Condition 3.16.2]; and water flows in Chedakuz Creek between Tatelkuz Lake and the confluence with Davidson Creek during the open water season [Condition 3.16.3].
94	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Data Analysis	Baseline data and more detail on the numerous power analysis that were conducted needs to be provided within the document to support the premise that the statistical tests proposed have a snowballs chance in Mexico of helping tell any kind of story except a "non-story".	The requested 2021 data are presented in the Blackwater Gold Project Fish and Aquatic Resources 2021 Field Report (Palmer 2022). These data have been summarized in this memo, if available at the time of writing. Power analysis methods described in this memo include the software used, the sample size tool within the software, and the variables inputted into the program. These methods provide the level of detail required to replicate the analyses.
94	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2		Data Analysis	Please clarify which data was used for the Site Selection Power Analysis (Section 2.3). Was data from Macnaughton et al. (2019) used to figure out how many sites to sample in Tatelkuz Lake? The Macnaughton et al. (2019) work recommended the inclusion of ~45 sites on the Milk River to estimate relative abuncance and CPUE. What is the justification for pooling CPUE from 2021 and this robust study (Macnaughton et al. 2019) when the datasets are absolutely not related and the work was done by someone else? There is no information on why only three 100m2 sites and 8 minnow trapping sites have been selected to provide the data necessary to provide population structure and fish condition for Lower Chedakus Creek. As per Condition 2.10 - please describe simulted fish and fish habitat data scenarios that are just beyond the thresholds required to trigger mitigation (including additional habitat compensation) beyond what was planned through the Environmental Assessment.	
95	30-Jun-22	Indigenous Communities	Appendix 5.1.2.6B Fish and Aquatic Resources 2013 Baseline Report (Section 4.10 Littoral Fish Habitat of Tatelkuz Lake)	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Please label the sampling points on the map so they can be cross-referenced to the table.	Figure 2.1 has been revised according to the requested changes.
96	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.1.2.2 Littoral Fish and Fish Habitat	Lake Levels	The amount of littoral habitat is directly related to monitoring of fish and fish habitat and should be measured as part of this program. Measureing lake levels is relevant and it in addition to its utility for "comparing to natural variation" it needs to be used to calculate littoral area as this is how impacts will be confirmed as "negligible" or not.	Four sites have been seleced for fish habitat monitoring to determine any changes in littoral habitat in Tatelkuz Lake. Any changes to these four sites will indicate changes are occurring in all littoral habitats across the lake. The measuring the exact total amount of littoral habitat is not critical to this monitoring program, as protection of all littoral habitat by preventing negative changes is the goal. As stated in Section 1.4 Condition 3.16.2 - Tatelkuz Lake Littoral Zone Monitoring During Operations, fish habitat monitoring will be performed in conjunction with hydrological monitoring of lake levels during pumping. This hydrological monitoring is important to first determine if the surface level of the lake is being affected by FWSS pumping to a measurable degree above natural variation, with water surface elevation determined by measuring the difference between the water level elevation and at least one of the four permanent benchmarks established around the lake.

96	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B2	2.1.2.2 Littoral Fish and Fish Habitat	Lake Levels	Total amount of littoral habitat is a simple metric to assess potential negative changes on littoral habitat and should be measured. The degree to which the amount of habitat is impacted will be related to naturally occuring lake level fluctuations and measureing total area is useful for understanding natural variability as well as potential impacts and is way too obvious of a metric to dismiss as not critical. It should be measured. Please include methodology to do so. If changes in area are "negligible" then the accuracy of the environmental assessment will be verified. Let's find out.	
97	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012		Fish and Fish Habitat Follow-up Program - Level of Detail	Please label the sampling points on the map so they can be cross-referenced to the table.	Figure 2.1 has been revised according to the requested changes.
98	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.2.1 Tatelkuz Lake Limnology	Fish and Fish Habitat Follow-up Program - Level of Detail	Please provide the baseline data by site in addition to in an amalgamated format.	The requested 2021 data has been summarized in this memo and the detailed data are presented in the Blackwater Gold Project Fish and Aquatic Resources 2021 Field Report (Palmer 2022).
99	30-Jun-22	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants Canada Limited. September 26, 2017.	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.2 Chedakuz Creek Water Quality	Fish and Fish Habitat Follow-up Program - Level of Detail	More detail is needed within this plan of how information from the AEMP will tie into the monitoring of these fish communities in a manner timely enough to be helpful for informing the program (ex. if nutrient levels increase by 50% and there are increases in prey abundance but there are overall decreases in fish abundance this needs to be explored as this can be interpreted as a greater impact than if the prey levels stayed the same).	Results from the AEMP's water quality measurements in Chedakuz Creek will be monitored to determine if significant changes occur in Chedakuz Creek compared to reference sites. Similar to the Condition 3.16 trigger response plan (Section 6.1 Follow-up Program Trigger Response) for the assessment end points identified in Table 4-3 Measurement and Assessment Endpoints for the Chedakuz Creek Summer Fish Assessment, the AEMP Trigger Action Response Plan has triggers for flow, nutrients, metal concentrations, and temperature (ERM 2022, Blackwater Gold Project Aquatic Effects Monitoring Program Plan). For example, if fish tissue selenium concentrations are higher than the 95th perentile baseline level or statistically signitifant between near-field and reference sites compared to baseline conditions, then monitoring will be increased, root causes will be confirmed and mitigated, and monitoring of the mitigation measures will be implemented.
99	21-Mar-23	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants Canada Limited. September 26, 2017.	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 Version B.2 Aug 29, 2022	2.3.2.2 Chedakuz Creek Water Quality	Fish and Fish Habitat Follow-up Program - Level of Detail	Thank you for the thoughtful and detailed response. Some of the detail of this response will be helpful within this plan. **Within this plan**, please include this detail of how the AEMP will tie into the monitoring of these fish communities in a manner timely enough to be helpful for informing this program. It is recognized that the reporting for this project is onerous and complicated however the potential impacts to the aquatic values in these territories are also onerous and complicated and we have a responsibility to evaluate them, communicated them and mitigate them the best we can. By tieing together the programs such as 3.16 and AEMP over time we will accomplish this and we thank you in advance for all your hard work, sweat and tears along this journey.	

100	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	More detail is needed within this plan of how information from the AEMP will tie into the monitoring of these fish communities in a manner timely enough to be helpful for informing the program (ex. if there are increases in prey abundance but there are overall decreases in fish abundance this needs to be explored as this can be interpreted as a greater impact than if the prey levels stayed the same).	Results from the AEMP's water quality measurements in Chedakuz Creek will be monitored to determine if significant changes occur in Chedakuz Creek compared to reference sites. Similar to the Condition 3.16 trigger response plan (Section 6.1 Follow-up Program Trigger Response) for the assessment end points identified in Table 4-3 Measurement and Assessment Endpoints for the Chedakuz Creek Summer Fish Assessment, the AEMP Trigger Action Response Plan has triggers for aquatic invertbrates (i.e., Rainbow Trout prey) (ERM 2022, Blackwater Gold Project Aquatic Effects Monitoring Program Plan). For example, if aquatic invertebrate community composition indicators are highly divergent from reference communities (defined by dissimilarity from the predictive CABIN reference site model) in two of more consecutive sampling events, with a trend in losses of EPT (pollution-sensitive taxa) or taxa representing important fish food sources, then responses will include: implementation of a sampling program and toxicity testing, root causes will be confirmed and mitigated, and monitoring of the mitigation measures will be implemented.
100	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Thank you for the thoughtful and detailed response. Some of the detail of this response will be helpful within this plan. Within this plan, please include this detail of how the AEMP will tie into the monitoring of these fish communities in a manner timely enough to be helpful for informing this program. It is recognized that the reporting for this project is onerous and complicated however the potential impacts to the aquatic values in these territories are also onerous and complicated and we have a responsibility to evaluate them, communicated them and mitigate them the best we can. By tieing together the programs such as 3.16 and AEMP over time we will accomplish this and we thank you in advance for all your hard work, sweat and tears along this journey.	
101	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Reconnaissance level habitat assessments are not suitable for a detailed monitoring program such as this. FHAP or better (ex. Riverstyles -https://riverstyles.com/) should be prescribed.	FHAP Level 1 survey has been added in place of the three 1:20,000 Reconnaisance sites. FHAP will be completed from the outlet of Tatelkuz Lake to Chedakuz Creek's confluence with Davidson Creek. This change has been made in Section 4.2.3.2 Field Methods - Summer Fish and Fish Habitat, and has been edited in Table 4-3 Measurement and Assessment End Points for the Chedakuz Creek Summer Fish Assessment.
102	30-Jun-22	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants Canada Limited. September 26, 2017.	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	This plan does not contain enough detail to validate habitat model predictions for Chedakuz Creek. A strategy to do so belongs within this plan.	The main focus of this program is on flows in Chedakuz Creek, which directly affect fish habitat. Continuous hydrometric gauges are operated on Chedakuz Creek immediately downstream of the outflow of Tatelkuz Lake and below its confluence with Davidson Creek. This streamflow record will be used in conjunction with existing SEFA models for the reach of Chedakuz Creek between Tatelkuz Lake and the confluence with Davidson Creek to estimate the reductions in physical fish habitat caused by the operations of the FWSS. For each relevant stanza, a timeseries of daily habitat will be generated by coupling the existing SEFA models to the observed streamflow record. This timeseries will be compared to a secondary timeseries of estimated habitat that would have occurred, had the FWSS not been operational.The relevant timeseries of habitat values for each stanza will be compared to a long-term baseline record to quantify reductions using a percentile-based approach. Additional work will be conducted to assess the validity of the SEFA model for Chedakuz Creek.
102	21-Mar-23	Indigenous Communities	ERM. 2017. Blackwater Gold Project – Consolidated Fish and Fish Habitat Effects Assessment. Memorandum prepared for New Gold by ERM Consultants Canada Limited. September 26, 2017.	Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Fish and Fish Habitat Follow-up Program - Level of Detail	Some of the detail of this response will be helpful within this plan. Please include this detail within Secton 4.3.3.1 of the plan.	

103	30-Jun-22	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.3.2.3 Chedakuz Creek Fish and Fish Habitat	Groundwater	Equipment limitations can be overcome through the purchase of new equipment.	Comment noted. The subject of this comment is not clear. Can the reviewer please clarify the Section and topic?
104	30-Jun-22	Indigenous Communities		Brenley Yuan	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	All	Kokanee shorespawners	Littoral zone surveys should be conducted along the entire shoreline of the lake and not at sampling points. You may miss sensitive habitat zones if you are not sampling the right areas.	Four sites have been seleced for fish habitat monitoring to determine any changes in littoral habitat in Tatelkuz Lake. These sites have been selected because they have known use by the target species, Brassy Minnow, and are representative of identified littoral areas around the lake. Any changes to these four sites will indicate changes are occurring in all littoral habitats across the lake. The measuring the exact total amount of littoral habitat is not critical to this monitoring program, as protection of all littoral habitat by preventing negative changes is the goal.
104	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.2 Littoral Fish and Fish Habitat	Littoral habitat survey sites	The document now states that littoral habitat monitoring will be conducted at 11 sites instead of 4, which is an improvement. Table 2-1 states that the 11 sites represent different littoral habitat types. Were these additional sites selected based on known Brassy Minnow use and/or suitability of habitat?	
105	30-Jun-22	Indigenous Communities		Brenley Yuan	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	All	Kokanee shorespawners	Are there shorespawning kokanee in Tatelkuz Lake? If it is unknown, then we should proceed with the assumption that they may be using the littoral zone for shorespawning. Specifically: 1. survey shoreline for kokanee spawning habitat (gravels generally 20-40 mm) 2. conduct shorespawner surveys during kokanee spawning season to monitor where they are spawning 3. ensure that redds are not dewatered during mine operation and pumping of water out of lake by monitoring lake levels in relation to redds	The Tatelkuz Lake shoreline is characterized by exposed cobble and sandy beaches (Section 3.1.2.1 of Appendix 5.1.2.6A Fish and Aquatic Resources 2011-2012 Baseline Report in the Application/EIS 2013), not the 20-40 mm gravels typical for Kokanee spawning. Only the six inlets of Tatelkuz Lake have identified gravel and cover, with generally marginal spawning and rearing capacity (Section 3.1.2.1 of Appendix 5.1.2.6A Fish and Aquatic Resources 2011-2012 Baseline Report in the Application/EIS 2013). Therefore, these areas were not identified as being important potential spawning locations requiring monitoring.
105	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	All	Kokanee shorespawners	Have in-lake monitoring works overlapped with KO spawning season such that incidental observations of redds/shorespawning activity may be made? The reviewer is having trouble reconciling the fact that gravel and cover have been identified in inlets, yet they have been deemed not to be potential spawning locations. It would be different if there was definitive local knowledge confirming that there are no KO shorespawners, however, it does not appear to be the case based on the proponent's response.	
106	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.2 Littoral Fish and Fish Habitat	Littoral habitat survey methods	Please provide the following information in the methods: 1) The document states that habitat data will be collected along transects spaced 1 m apart. What is the total length at each site where you will be conducing these transects? 2) Table 2-1 appears to be missing some footnotes. Having descriptions of each "Littoral Habitat Type" would be helpful.	

107	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Figure 2-2 and Table 2-4, page 14	Data presentation	For parameters with high between-site variance, each site should be presented separately rather than averages/ranges for combined sites. Also, parameters that differ between hypolimnion and epilimnion (e.g. temp and DO) should also be presented separately. Presenting means/ranges in these cases makes interpretation difficult.	
108	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.4 Frequency and Duration, page 17	Monitoring frequency	This section does not mention frequency of fish capture surveys and limnology surveys. The same paragraph reads like no monitoring will occur in the first 6 years of operation (or however many years until the FWSS is operational). However, a later section (4.4 page 29) suggests that baseline monitoring will occur right up to the start of FWSS operations: "Prior to Year 6, pre-construction and pre-pumping surveys will be completed to establish a recent baseline dataset to enable comparison" In section 5 (page 29), it then states "One year of monitoring will occur for follow-up program 3.16.1 to provide updated baseline conditions prior to water withdrawal from Tatelkuz Lake." Can you edit these sections for more consistency and clarity surrounding baseline monitoring frequency and timelines? The reviewer is of the opinion that baseline monitoring should be conducted annually prior to FWSS operations in order to track trends in the data. A 6-year gap in baseline data is not acceptable.	
109	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	3.2.2 Littoral Fish and Fish Habitat	Monitoring methods	The beach seining methods in this section differs from the pre-operation methods in section 2.2.2. A 100m2 section was replaced with a 15 m site. Can you provide more clarity with respect to this change?	
110	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.1 Lower Chedakuz Creek Discharge	Data sharing	How will real-time hydrometric data be shared with Nations? Have you discussed enabling access to the datalogger account or have weekly reports be sent out to Nations' emails?	
111	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.2 Lower Chedakuz Creek Water Quality	WQ parameters	Please provide a list of parameters to be tested. The categories provided are too broad (e.g. nutrients and organics). Also, what is the main driver behind WQ sampling? Are there specific parameters of concern you are looking for? Those should be identified.	
111	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.3.3.3 and Table 4-6, page 27-28	FHAP	Was FHAP conducted in 2021? In earlier methods it appeared as though FHAP would conducted along the entire length of Chedakuz Creek from the lake outlet to Davidson Creek. However, in Table 4-6 it appears that perhaps FHAP was only conducted at sites? Can you clarify what was done and the total length where FHAP is planned to be conducted? Why was only 3 sites sampled in 2021? Was more baseline data collected in 2022?	

112	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	6.1 Follow-up Program Trigger Response	Adaptive management	"However, if agreed-upon adaptive measures in response to triggers related to the monitoring metrics outlined in this follow-up program prove insufficient, new mitigation or fish offsetting measures might be required." Can you confirm that the only adaptive measure is changing the FWR/FWSS withdrawal amounts from the lake? Or are there additional measures? Is there a decision support framework developed if management of Chedakuz and Davidson Creek fish/fish habitat are in conflict with one another (i.e. cannot increase flow in 1 creek without causing negative impacts to the other)? Have there been discussions on which creek would take priority?	
113	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	7 Reporting	Data sharing	Artemis/Palmer has agreed to share preliminary field memos and data packages in the fall/winter immediately following each field season. This should be commited in writing with a reasonable deadline in this section as data sharing timeline has been a major concern raised by the Nations.	
114	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.2.1	Discharge	Please provide a reference for the following statement. "Standard techniques are employed at the hydrometric station to manually measure streamflow."	
115	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.2.3.1	FHAP	Will **all** the meso-habitats be sampled between the lake outlet and Davidson Creek? Given the short length of Creek (<1 km) that would be preferred. If that is not the methodology, please indicate the sampling design.	
116	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.2.3.1	Closed -site E-fishing	Will the 4 meso-habitat types (riffle, run, pool and glide) be sample at the 3 locations. If not what is the study design?	
117	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.2.3.2	Closed -site E-fishing	CPUE is not a useful metric with respect to e-fishing. Consisting doing the 3 passing is much more important. Density and Biomass are the metrics that should be compared over time.	

118	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.2.3.3	Ko Spawner Survey	Will "Area Under the Curve" be used for a population estimate, so a spawner population trend can be monitored over time?		
119	21-Mar-23	Indigenous Communities		Herb Tepper	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.3.1 Figure 4-1	Discharge	Why was there no data collected from March to May?		
120	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 2.1	Littoral Surveys	Brassy minnow is the target species during these littoral zone surveys. Will ohter fish be documented? Useful for potential changes in species distribution and abundance.		
121	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	2.2.2 Littoral Fish and Fish Habitat	Fish Sampling	Was beach seining the method used for original work? If not, the original method should also potentialy be included (i.e., if minnow traps were used should consider this as an additional method, although won't allow density to be estimated). This stated further in report, and the justification for beach seining only is put forth, but some minnow trapping at sites would be beneficial (would allow CPUE to be monitored).		
122	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.3.1 Field Methods – Overview	Backpack electrofishing	Are three sites enough to detect changes? What if there are low numbers of fish caught?		
123	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.2.3.3 Field Methods – Overview	Adult KO Surveys	Suggest repeated walks capture the start and end of spawning and allow for an AUC estimate.		

124	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	4.3.3.1 Population Structure	Fish Sampled	Suggest minimum of 30 fish are measured for length and weight.	
125	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.3.3.3	Spelling	colon ected should be collected	
126	21-Mar-23	Indigenous Communities		James Baxter	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 4.3.4	KO Spawner Survey Results	The fact that no KO were onserved in 2021 shows that timing can be variable annually. How will this potential annual variability in spawning timing be incorporated? FN do the counts?	
127	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	Section 1.2 Applicable Guidance	Governance	Davidson Creek, Chedakuz Creek, and Tatelkuz Lak are respectively classified class III, class II and class I surface waterbodies under the Yinka Dene 'Uza'hné Surface Water Management Policy. This should be documented in the guidance section with brief details of water management goals detailed from the policy document (ex. *For Class I waters, the primary water management goal is to maintain and protect the quality of these special waters and the associated water uses (i.e., water quality conditions should not be degraded, substantially altered, or impaired by human activities). In addition, stream flows and/or lake levels should remain substantially unaltered relative to baseline conditions.")*	
128	21-Mar-23	Indigenous Communities		Al Irvine (New Graph Environment Ltd.), UFN (Ulkatcho first nation), LDN (Lhoosk'uz Dené Nation), Keefer Ecological Associates (KES)	Follow-up Programs for Condition 3.16 of the Blackwater Gold Project Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012	All	Professional Diligence	There are no reference sites proposed for this program. Reference sites are crucial for accurate assessments of the impacts of mine activities on the surrounding environment as they provide a basis for comparison. By comparing the ecological conditions at the study sites to those at the reference sites, we have a chance at determining whether any observed differences over time are the result of mining activity or other factors. For example, changes in water quality or fish population community composition may be caused by factors such as weather patterns, natural disturbances, or seasonal variations. Please include reference sites for all study components. We recommend connecting with academic institutions to explore the possibility of tying in to academic led programs in the region.	

Exhibit 6
Wildlife Mitigation and Management Plan (ITT)

Blackwater Gold Project										
ADMIN	COMMENTS									
ID	Comment Date	Reviewer Agency	Reviewer Source Doc	Reviewer Name	Application Document	Application Section or Page	Comment Theme	Comment	Response	Response Date
1	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 1.2.1	Legislation	Table 1.2-1: "Governs protection of wildlife and wildlife habitat, and wildlife management, including alien species, angling, hunting, trapping and guide outfitting, and firearms, and designation of wildlife management areas and species at risk Section 34 of the Act protects birds, eggs, and occupied nests from possession, molestation, injury, or destruction." Unoccupied nests of certain species are also protected under this act. (*Wildlife Act* 34b)	Table was deleted; text no longer exists.	31-Oct-21
2	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 1.2.3	Permitting	Note potential permits relating to wildlife work, such as exemptions to the Wildlife Act (e.g., nest and beaver dam removal) and scientific collection/salvage permits, if applicable.	Text related to permits has been added to Section 1.3.2	31-Oct-21
3	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 1.3	Adaptive Management Framework	Table 1.3-1: Please remove "No effect" from first row, this just repeats the lower line. What is low, medium, and high-level action please be more speciifc? We propose to also reevaluate the monitoring plan (e.g., increase survey frequency) if monitoring results are continually negative (i.e., greater adverse impact) in order to document effect changes more accurately. Please use bulletpoints.	Table has been deleted. Species-specific triggers have been added to the monitoring section in lieu of generalized triggers included in the August version of the WMMP.	31-Oct-21
4	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 2.1	Training & Awareness	Please provide additional detail in regard to training "refreshers" concerning trigger and/or frequency (e.g., following an incident report or seasonally), topic(s) to be discussed.	Text has been updated in "Section 2.1 Training and Awareness" to specify that training refreshers will be provided annually and as-needed following any wildlife incidents or accidents.	31-Oct-21
5	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 2.1	Training & Awareness	"Wildlife sensitive locations and timing windows as applicable", "Notification of areas with increased wildlife activity;" Propose change in language to be more specific - include mention of wildlife active den and nest setbacks/buffers, environmental feature no-work zones (e.g., riparian, nesting habitat, wallows, mineral licks, etc.) Please include training handouts/visuals regarding examples of species of interest, dens, nests, licks, etc. to be used in the appendix. Here's a good example of a fisher den guidelines doc: https://www.bcfisherhabitat.ca/wp-content/uploads/2017/02/fisher-habitat-photo-guide-20170210.pdf	Text has been updated in "Section 2.1 Training and Awareness" to include the examples provided. Training materials will be produced prior to construction and shared with Indigenous Groups for their review. Training materials will include describing the species of interest, wildlife trails, dens, nests, licks etc. as well as mitigation measures and reporting requirements for all personnel.	31-Oct-21
6	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 2.2	Related Documents	Typo - it is the Caribou Mitigation and Monitoring Plan (CMMP)	Text has been updated in "Section 2.2 Related Documents".	31-Oct-21
7	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 2.3	Incident Identification	23n - "the means by which the Holder will, throughout all phases of the Project..." Please provide more detail as to how wildlife interactions and incidents will be reported and logged. Who is responsible for this work? Include a wildlife sighting form (or equivalent) or provide a reference to one for BW Gold workers. What information will be logged? Date, time, location, species, observer, behaviour, description of the interaction, outcome (e.g., mortality, injury), immediate response, relevant monitoring program, etc.? Copies of these to be included in the annual WMMP report in an appendix?	Text has been updated in "Section 2.3 Incident Identification" to include 1) who will be responsible for this work, 2) an overview of the data being recorded and 3) how it will be reported. The Environmental Manager, EM) will be in charge of recording and responding to wildlife interactions and incidents, while all personnel will be responsible for reporting incidental observations of wildlife, as well as interactions and incidents. The data being recorded will include the date, time, location, species, observer, behaviour, description of the interaction, outome, immediate response, any updates to mitigation plans required, and any additional mitigation required. Reporting of interactions and incidents will be through the annual wildlife compliance report (The WMMP Report), where incidetnal observations willl be summarized in a spatial format to identify if there are "hot spots" of observations, and what mitigation or management measures were enacted based on individual reports and the holistic data involving all yearly reports together. For instance, a fox may be observed on one day, which may not require any special mitigation, but multiple observations of the same fox in the same area (camp kitchen) may indicate that updated or new mitigation is required for a potential attractant.	31-Oct-21
8	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 3.3.1	Sensitive Timing Windows	Please include a horizontal bar graph calendar of all the sensitive timing windows to visualize how and when they overlap. It makes planning fieldwork more straightfoward for the Environmental Manager and helps to visualize how construction may be affected - usually Environmental Monitors find it very useful!	It is our experience that timing windows should be presented along with information on the sensitive habitat and specific buffering and other mitigations. Presenting the timing windows alone makes it appear that there is not any season where clearing can occur.	31-Oct-21
9	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 3.4	Transmission Line Management	"Mitigation effectiveness will be confirmed via a follow-up monitoring program, see Section 4.1.7.2;" This section does not exist please update the document and location.	Text has been updated to refer to "Section 4.7 Birds"	31-Oct-21
10	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 3.4	Transmission Line Management	"Monitoring programs will also be implemented to assess potential ongoing effects of the transmission line on birds (Section 4.1.7)." Section 4.1.7 does not exist and there is no transmission line monitoring protocol in 4.7.1 as it refers to this section (3.4) and Section 4.1.7.2, which does not exist.	Text has been updated to refer to "Section 4.7 Birds"	31-Oct-21

Blackwater Gold Project										
ADMIN	COMMENTS									
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11	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 3.5.2	Tailings Storage Facility	Please include detail regarding water quality and monitoring methods/water testing guidelines specific to health and safety of wildlife. Provides references to subsections in relevant MPs where appropriate. "We will test the water to ensure it is safe for animals" is too vague. Identify specific testing criteria and quantitative triggers/thresholds for adaptive management.	Additional text has been added to "Section 3.5.1 Tailings Storage Facility Mitigations" that describes the approach for determining if water is safe for wildlife. The plan now refers to the Conceptual Site Model (CSM report) which describes water quality guideline applicable to wildlife (collectively referred to as WQG-WL) considering: • BC approved or working water quality guidelines for the protection of wildlife or livestock (BC ENV 2019a, 2021); • CCME water quality guidelines for the protection of livestock (CCME 2021d); and • BC CSR (BC Reg 375/96) Schedule 3.2 generic numerical standards for livestock use. The Mine Site Water and Discharge Monitoring and Management Plan (MSWDMMP) describes routine sampling of on-site water sources, including the Tailings Storage Facility. The WMMP has been updated to refer to the water sampling in the MSWDMMP, the results of which will be compared to the WQG-WL from the CWM report and reported in the annual wildlife compliance report (WMMP Report).	31-Oct-21
12	12-Aug-21			LDN/UFN	WMMP	Section 3.6.2	Wildlife Activity on Roadways	All wildlife sightings, interactions, and incidents will be recorded and reported to mine environmental and other relevant personnel as soon as safe to do so' PLEASE ADD A spatial GIS database of locations of all wildlife encounters will be kept in order to facilitate adaptive management, mitigation measures on site and roadways. This can be a simple google earth database or using GIS software, this will simplify tracking of wildlife conerns and seaosnal issue and actions.	Text has been updated in "Section 2.3 Incident Identification".	31-Oct-21
13	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4	Species-Specific Monitoring and Adaptive Management	Include summary of baseline information in each subsection (e.g., Amphibians, Bats, Caribou, etc.). Maps showing habitat suitability and baseline survey observations need to be included. This information is useful to the EM in coordinating surveys, salvages, and implementing mitigation measures. Please include "reschedule construction activities" under species-specific mitigation measures per P 23h.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	31-Oct-21
14	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4	Species-Specific Monitoring and Adaptive Management	No mention of invertebrates as req per P 23a (Provintial conditions). Each component listed in 23a requires mitigation measures and monitoring plan(s) based on adaptive management reqs in P 3.	A new section has been added: "Section 4.8 Invertebrates".	31-Oct-21
15	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4	Species-Specific Monitoring and Adaptive Management	Having read through this section, I feel it would be far easier to understand and review the monitoring plans if they were presented in table format with each requirement (methods, locations, timing, duration, frequency) detailed in one of five boxes - just one column of five rows with a monitoring plan title (e.g., "Bird Mortality Monitoring (Tranmission Line)") This would make it easier for us to review for condition requirements and much easier for the EM and QEPs to understand and implement at the mine.	Throughout "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" followup monitoring programs have been presented in table format with Objectives, Performance Indicators, Triggers/Thresholds and Methods. These sections have also been added to the text for additional detail.	31-Oct-21
16	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1	Amphibian - Overview	Requires general summary of baseline information including spatial habitat and baseline observation mapping.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	31-Oct-21
17	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.1	Amphibian - Pre-Construction Surveys	"Sources of current breeding ponds will be identified using these baseline data and pre-construction surveys in the mine site and transmission line right of way (RoW)." Western toads migrate annually and baseline data is very dated and limited - all potential breeding habitat should be surveyed prior to construction activities during the April 1 to Sept 30 window to prevent incidental take.	Amphibian surveys were conducted in 2011, 2012 and 2017. Pre-construction surveys were also conducted for amphibians during the summer of 2021 and will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed.	31-Oct-21
18	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibian - Pre-Construction Surveys	"Conduct a baseline inventory and assessment, including a comprehensive risk assessment;" Mitigation measures in this section should be discussed in order of application - baseline analysis and hab mapping, surveys of toad habitat, then buffering active breeding sites/migration corridors, then salvage and relocation if required, with follow-up monitoring of breeding/overwintering habitat and relocation area for success.	The text has been updated in "Section 4.1 Amphibians".	31-Oct-21
19	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibians - Mitigation for Amphibians	Section should include BMPs outlined in Table 3.2-1 and industry-standard guideline documents (Section 2.2), including typical setback distances "as determined by the QEP". Other standard mitigations measures include: maintaining connectivity between breeding and overwintering habitat, and maintaining structures that are used to protect amphibians.	The majority of mitigation measures for amphibians are listed in Section 3. A text citation in Section 4.1.2 now directs the reader to Section 3.	31-Oct-21
20	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibians - Mitigation for Amphibians	Our Draft Mitigation Table notes a sensitive period of April 1 to Sept 30 per ECCC guidance.	Table 3.3-1 lists the sensitive period for amphibians as April 1 to Sept 30 based on ECCC guidance. Note that this range of dates is for a large geographic area. A site-specific date range will be defined by a QP with extensive knowledge of amphibian timing in the Project area and elevation.	31-Oct-21

Blackwater Gold Project										
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21	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibians - Mitigation for Amphibians	"BC Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia (MOE 2014b),which recommends a 30-150 m buffer zone." This is a guideline for general amphibian buffers. There is additional information on western toad buffers in Section 5.1.3; they suggest a minimum of 30 meters plus 100 meters or more for habitat management. Buffering migration routes for connectivity and overwintering habitat at the discretion of QEP.	Additional text has been added to Section 4.1.2 Toads, on setback buffers for breeding ponds.	31-Oct-21
22	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibians - Mitigation for Amphibians	"Field surveys during the baseline program (2011-2013) identified several breeding ponds for western toad inside the planned Project footprint." The baseline report notes 4 toads found in lodgepole pine forest and the EAC application says 6 western toad obsevrations in the LSA. Maps showing these locations are important for management please add them.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	31-Oct-21
23	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibians - Mitigation for Amphibians	"Mitigation for amphibians will include avoidance of known breeding ponds during sensitive periods." Please rephrase to "... include avoidance of breeding habitat as determined by pre-construction amphibian surveys"	Text has been updated in Section 4.1.2 to read: "Mitigation for amphibians will include avoidance of breeding ponds identified through baseline and pre-construction surveys during sensitive periods."	31-Oct-21
24	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.2	Amphibians - Mitigation for Amphibians	"Other relevant documents for western toad do not identify sensitive periods, including:" Not necessary to include a list of documents that don't contain timing information. List these as BMP guidance documents in the previous section if at all.	The text has been removed from Section 4.1.2 Mitigation for Amphibians.	31-Oct-21
25	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.3	Amphibians - Follow-up Program	"Annual surveys from the start of construction until the end of decommissioning in areas where buffers were used to protect western toad breeding habitat;" Annual surveys for breeding habitat? When wouldn't buffers be used to protect western toad breeding habitat, assuming within breeding season and the site is not being salvaged pre-construction? Please clarify.	In some cases, toad breeding ponds may occur near the Project site or on the Project site but not removed during construction. These ponds would be buffered and monitored. Additional text has been added to Section 4.1.3.3 Monitoring Ponds for Breeding Toads.	31-Oct-21
26	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.3	Amphibians - Follow-up Program	Baseline data found toads on road surveys. These stretches of road and mitigation measures (crossings, remote camera monitoring) should be documented and discussed here or in the mitigation section? This information is valuable to the manager responsible for mitigating impacts to toads and provide guidance on locations of concern.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	31-Oct-21
27	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.3	Amphibians - Follow-up Program	"The amount of habitat lost will be evaluated each year by comparing the as-built Project footprint with the results of pre-construction surveys for breeding sites." May be beneficial for this document to distinguish more clearly between active breeding sites and breeding habitat as both seem to be mentioned interchangeably.	Text has been updated to refer to refer to breeding habitat - where toads may breed - and breeding ponds - where surveys confirm toads breeding.	31-Oct-21
28	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.3	Amphibians - Follow-up Program	"Annual breeding surveys will be conducted in breeding ponds adjacent to the Project footprint (identified in pre-construction surveys)" Breeding ponds or breeding habitat? Important for continuity as EM may just survey "breeding ponds" identified in the baseline info accidentally. Need more detail in regard to timing. How far outside of the Project footprint will these surveys cover?	Follow-up surveys will be conducted in all habitats where breeding has been confirmed to monitor for continued breeding at these sites. This has been clarified in the text in Sedction 4.1.3.3.	31-Oct-21
29	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.4	Amphibian - Adaptive Management for Amphibians	Table 4.1-1: Thresholds are vague and unscientific. Change near to a specific distance (as lower in the table and based on requirements. I would suggest Low - means the detection of mortality (e.g. 1 toad). Medium and high levels of mortality should also be specified here (something like 2-10 medium and above 10 High). As we are talking about additional mortaility these figures should be low as they are additive with natural mortality. How far outside of the Project footprint ? Low and medium represent an increase in mortality, while high simply states "repeated amphibian mortality," which means potentially no change in mortality, this needs to be revised.	All thresholds/triggers in Section 4 (Species-Specific Mitigation and Monitoring) have been updated to make them more specific. The previous approach for thresholds was to develop a threshold that could be applied across different management plans. The current approach is to produce thresholds that are species-specific. For most species, however, there are not readily available published thresholds or specific thresholds listed in the EAC Application, so the thresholds are reliant on professional experience.	31-Oct-21
30	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.4	Amphibian - Adaptive Management for Amphibians	"Monitoring will be annual during construction and operations. If no effect has been observed during the first 5 years, then monitoring will occur every 5 years of operations until closure when monitoring will cease." This document's toad references note large fluctuations in western toad numbers from year to year. How will performing a survey once every 5 years capture reliable population data? Considering the status of toads and that surveys are not very time consuming we would suggest surveys can be reduced to every 2 years to provide the necessary monitoring data.	Updated Monitoring frequency to be annually, per federal condition 8.21. (Sections 4.1.3.2, 4.1.3.3, 4.1.3.4)	31-Oct-21
31	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.1.4	Amphibian - Adaptive Management for Amphibians	"Potential adaptive management measures are described in the Mitigation Table (MT 6-27) and include:" These are standard mitigation measures and should be in the mitigation measures sub-section for clarity. Can be listed as adaptive management measures.	Adaptive management measures have been updated in Section 4.1.3.3 Monitoring Ponds for Breeding Toads.	31-Oct-21
32	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2	Bats - Overview	Requires general summary of baseline information including spatial habitat and baseline observation mapping.	A baseline data section has been added for each chapter in "Section 4 Species-Specific Mitigation, Monitoring and Adaptive Management" that describes baseline data collected in 2011, 2012 and 2017. Data from pre-construction surveys conducted in 2021 will be reported in a 2021 Wildlife Baseline Report and then updated into the WMMP Plan as needed. Maps will be added that include all baseline plus 2021 data at that time.	31-Oct-21
33	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.1	Bats - Pre-Construction Surveys	No mention of RISC survey methodology?	RIC (1998) was cited in Section 4.2.3 in previous version. It is now cited in Section 4.2.3.1.	31-Oct-21
34	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.1	Bats - Pre-Construction Surveys	"Methods for roost surveys will take into account: Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia (FLNRORD 2014)." Please list relevant secitions rather than reference entire guidance documents. Noting that your methods will "take into account" a large guidance document is not very informative to reviewers.	Section reference added.	31-Oct-21

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35	12-Aug-21			LDN/UFN	WMMP	Section 4.2.1	Bats - Pre-Construction Surveys	The mine site (and a buffer surrounding the mine site). - Please specify buffers (see below)	Section 4.2.2 (Mitigation for Bats) indicates that buffers will be established around any active hibernacula and active roots following a risk-based approach in consultation with Indigenous groups and relevant authorities that considers the species present, the wildlife feature, it's location and the risk of disturbing the feature with the type of activity being considered. For instance, larger buffers may be used for noisy activities, but other activities may have smaller buffers.	31-Oct-21
36	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.2	Bats - Mitigation for Bats	Buffer guidelines from Compendium, Bats (Section 2.4.1): "5.2.1. Avoid removal of rock or talus within a minimum 300 m of valuable bat habitat (e.g. colonial maternity or hibernation sites). 5.2.2. Avoid removal of vegetation within a minimum additional 200 m management zone. 5.2.3. Do not conduct blasting within 300 m of valuable bat habitat features. 5.2.4. Follow risk timing windows when working within 300 m of valuable bat habitat features." Also, "3.4. Follow risk timing windows when planning and conducting development activities in or near colonial sites (communal roosting, nursing or hibernaculum sites). 3.4.1. Note that buffer distances should be activity-dependent (e.g. blasting disturbance versus clearing activities): Blasting within 1000 m of important features should ensure sound concussion is less than 150 decibels, that the shock wave is less than 1.5 p.s.i. and the peak particle velocity is less than 15 mm/second. No blasting should occur within 300 m of valuable bat habitat features." Large buffers means large survey areas.	Section 4.2.2 (Mitigation for Bats) indicates that buffers will be established around any active hibernacula and active roots following a risk-based approach in consultation with Indigenous groups and relevant authorities that considers the species present, the wildlife feature, it's location and the risk of disturbing the feature with the type of activity being considered. For instance, larger buffers may be used for noisy activities, but other activities may have smaller buffers.	31-Oct-21
37	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.3	Bats - Follow-up Program	"Where an active hibernacula or roost was identified during pre-construction or pre-clearing surveys, and a buffer zone established around this feature, continued use of this buffer area will be monitored for bats during construction and operations every 2 years. We assume this would use ARUs please specifiy and provide a basic sampling strategy and how you will estimate deployment time to ensure coverage.	Additional detail on methods for monitoring has been provided in Section 4.2.3.1.	31-Oct-21
38	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.3	Bats - Follow-up Program	"Annual surveys of bad presence will be conducted using Autonomous Recording Units (ARUs) to detect relative bat activity (RIC 1998)." Typo. Please write the name of the RISC methodology in-text for clarity. Monitoring program must include sampling strategy or design and location (if avaialble), frequency, timing.	Locations will be determined following assessment of 2021 field results. The study area is defined in Section 4.2.3 and the RIC methodology supports the deployment of ARUs at locations within the study area likely to yield bat activity. These will include ARU deployment near bat boxes as specified in Section 4.2.3	31-Oct-21
39	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.3	Bats - Follow-up Program	"Where roosts were lost in the mine footprint and roosting structures were installed as an offset, these structures will be monitored." The condition (8.15) states the "loss of roosting habitat", not the loss of established roosts. The amount of habitat to be compensated should be determined and boxes are to be installed prior to construction. What type of roosting structures (or what are the options)?	BW Gold plans to install bat boxes to offset for any active roosting trees that will be removed through ground clearing. Since clearing will be progressive, as contruction continues, the plan is to put out bat boxes in each year of construction.	31-Oct-21
40	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.3	Bats - Follow-up Program	"... continued use of this buffer area will be monitored for bats during construction and operations every 2 years." What is the rationale for this frequency? Why not annually? May be required if additional works are scheduled to occur nearby the following season?	Annual monitoring now specified in Section 4.2.3.	31-Oct-21
41	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2.4	Bats - Adaptive Management for Bats	Table 4.2-1: Similar concerns as for amphibians (Table 4.1-1). Lack of detail in regard to monitoring methodology and data quantification of impacts. How much "less" bat activity? How will bat activity be differentiated with respect to threshold distances? Please add quantities thast are measurable (e.g. sites with reduced utilisation) sites where bat activity has ceased (number of sites and other details are ways in which you can quantfy loss or gain of bat activity.	The primary monitoring metric will be a reduction in the number of species at a particular site and a reduction in the number of sites with bats. It is not possible to determine the population (number) of bats at a particular location using ARUs, since the recording units can not cound individuals. The trigger has been updated to a "measurable change in diversity or distribution over time". The natural variability of bat distribution at the site will be determined from control areas outside of the Project footprint.	31-Oct-21
42	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.3	Caribou - Overview	Southern mountain caribou (Rangifer tarandus caribou) are specialized to higher elevation habitats..... rely on arboreal lichen as a main source of food, particularly in winter (MFLNRO 2014). - This is not correct, please update. The Tweedsmuir herd is a 'Northern Group of the Southern Mountain caribou population (this can be cited - Government of Canada. (2020a). Southern Mountain Caribou in British Columbia: bilateral conservation agreement between Canada and British Columbia. Retrieved from https://www. canada.ca/en/environment-climate-change/services/species-riskpublic-registry/conservation-agreements/southern-mountaincaribou-british-colombia-2020.html. Not to be confused with Norther mountain caribou or southern mountain caribou group which are arborial lichen specialists.	Section 4.3 Caribou now points the reader to the CMMP.	31-Oct-21
43	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.2	Caribou - Overview	This LPU is also not a high altitude specialist they use elevations ranging from 850 meters to 2350 meters above sea level. They also do not specialize on arborial lichens - In winter the Tweedsmuir - Entiako caribou subpopulation feed mostly on low elevation terrestrial lichens and high elevation terrestrial and arboreal lichens in the subalpine. Whereas in the summer habitat can range from alpine to low elevations and the heard has a varied diet foraging on lichen, grasses, sedges, forbs and other vegetation.	Section 4.3 Caribou now points the reader to the CMMP.	31-Oct-21
44	12-Aug-21			LDN/UFN	WMMP	Section 4.3	Caribou - Overview	This section provides an overview of monitoring and mitigation for caribou, which is detailed in the Caribou Mitigation and Monitoring Plan (CMMP). - One of the major complaints of the CMMP was that there were no details of the mintoring plan, please check that this information is now in the CMMP.	Section 4.3 Caribou now points the reader to the CMMP.	31-Oct-21
45	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.3	Caribou - Overview	Please add a brief summary of baseline information and mapping.	Section 4.3 Caribou now points the reader to the CMMP.	31-Oct-21

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46	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.3.1	Caribou - Pre-Construction Surveys	"maintained in their natural state (Table 4.1-1, P 23c, DS 8.6)." Table 4.1-1 is the table for *Adaptive Management Response for Amphibians* . This table is referenced in other sections of the WMMP that have nothing to do with amphibian management.	Section 4.3 Caribou now points the reader to the CMMP.	31-Oct-21
47	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4	Moose - Overview	Please add a brief summary of baseline information, including baseline hab and observation mapping in an appendix.	Baseline summary for moose is now included in Section 4.4.3	31-Oct-21
48	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.1	Moose - Pre-Construction Surveys	Condition 23d - Please provide more detail as to how BW Gold will confirm or update Project habitat suitability mapping based on HSM RISC survey results	HSM mapping field work for moose occurred in 2021 and will be reported in the 2021 Wildlife Baseline report, including an evaluation of existing habitat suitability mapping based on the 2021 habitat plots. This information has been added to Section 4.4.1.	31-Oct-21
49	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.1	Moose - Pre-Construction Surveys	"Pre-construction field surveys will be undertaken within the mine site and transmission line RoW following (RISC 1999) British Columbia Wildlife Habitat Ratings (WHR) Standards – 1999)." Place reference at end and remove extra bracket before period. What type of field survey? Add more detail concerning survey timing and duration.	HSM mapping field work for moose occurred in 2021 and will be reported in the 2021 Wildlife Baseline report, including an evaluation of existing habitat suitatiliby mapping based on the 2021 habitat plots.	31-Oct-21
50	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.1	Moose - Pre-Construction Surveys	Typo: "Condition 23d of directs BW Gold"	Text edit made (section 4.4.1).	31-Oct-21
51	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"The survey area and methods will follow those conducted during 2016." Describe them per the requirements in P 3d and provide a reference to past reports, if required.	Aerial survey methods are now described in Section 4.4.3.3.	31-Oct-21
52	12-Aug-21			LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	Available telemetry data will be used to evaluate seasonal movements of moose relative to the Project, and to inform the area for the monitoring program (MT 3-38) - I would remove the last part of this sentence as this is not a suitable use of telemetry data 'using the telemetry data to inform the monitoring program' Telemetry data are not necessarily good indicators of population distribution whereas aerial surveys are.	It is standard practice to use all available information, including telemetry, to delineate and stratify survey units when dealing with ungulates in BC.	31-Oct-21
53	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	Typo: "BW Gold conducted a fall survey of the Mt. Davidson area (Figure 4.1-1)."please revise to reference Figure 4.4-1?	Text has been edited to refer to Table 4.4-1.	31-Oct-21
54	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"Surveys begin pre-construction and continue every five years to monitor population trends during operations;" Is five years sufficient to capture significant changes in the moose population? Can you justify this is this the provincial survey timing?	Imprecision in moose surveys means that any modest population differences (e.g., less than 20%) that may occur in one or two years will not be evident when comparing surveys one or two years apart. Five years should be sufficient to reveal persistent changes through time. Also, typically this is the frequency of surveys that FLNRORD will provide a permit for - balancing disturbance and stress from helicopter overflights with the need for accurate monitoring data.	31-Oct-21
55	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"Changes in moose population dynamics would be predicted to affect the overall number of moose occurring in the regional area (moose abundance)." Change to 'are related to the overall number of moose ...	Text deleted. See new Section 4.4.3.3 for aerial survey details	31-Oct-21
56	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"Distribution and abundance of moose will be measured through an aerial survey program that will begin prior to substantial construction activities and continue through operations into closure." Please give examples of "substantial construction activities" as this language is quite vague.	Text deleted. See new Section 4.4.3.3 for aerial survey details	31-Oct-21
57	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"A draft plan for aerial surveys for moose is provided below:" When will the final plan be available?	The plan presented in Section 4.4.3.3 will be applied, subject to input during consultation.	31-Oct-21
58	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"BW Gold committed to conducting a follow-up survey during the fall, which is planned for December 2021. The survey area and methods will follow those conducted during 2016." Edit to include more details per conditions and a reference to the 2016 study.	Aerial survey details now provided in new Section 4.4.3.3	31-Oct-21
59	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.3	Moose - Follow-up Program	"Surveys begin pre-construction and continue every five years to monitor population trends during operations;" Five-year frequency able to effectively capture changes in moose population caused by the Project?	Imprecision in moose surveys means that any modest population differences (e.g., less than 20%) that may occur in one or two years will not be evident when comparing surveys one or two years apart. Five years should be sufficient to reveal persistent changes through time. Also, typically this is the frequency of surveys that FLNRORD will provide a permit for - balancing disturbance and stress from helicopter overflights with the need for accurate monitoring data.	31-Oct-21
60	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.4	Moose - Adaptive Management for Moose	"• Less habitat loss than predicted" What is the point of including this at every threshold, as this isn't a trigger you should remove from the table or expain the point of inclusion - should this be a graduated trigger ..more habitat loss than predicted etc please correct if that is the point? Can you update 'moose mortalities' to moose mortalities due to mine oporations' otherwise this is not 100% clear what type of mortality it refers to.	All thresholds/triggers for wildlife monitoring in Section 4 (Species-Specific Mitigation, Monitoring and Adaptive Management) have been updated to make them specific to the wildlife species or group.	31-Oct-21
61	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.4	Moose - Adaptive Management for Moose	"• Trend of fewer caribou near the mine or..." Please correct this should be moose not caribou?	Text updated in Section 4.4.3 (Monitoring of Predicted Effects and Mitigation Effectiveness) to specify moose.	31-Oct-21
62	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.4.4	Moose - Adaptive Management for Moose	"• Implement new mitigation measures if necessary." and "• Evaluate and discuss if new mitigation measures are feasible" Why wouldn't additional measures be implemented if the medium threshold is triggered? It would be more helpful to include a rate rather than just a number for some triggers. <5 moose during the mine's life? Who decides whether additional measures are necessary?	All thresholds/triggers for wildlife monitoring in Section 4 (Species-Specific Mitigation, Monitoring and Adaptive Management) have been updated to make them specific to the wildlife species or group.	31-Oct-21

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63	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5	Furbearers - Overview	Please provide summary of baseline data including baseline habitat and observation mapping. Additional information on furbearer habitat requirements will further inform field surveys and the likelihood of incidental den finds.	Baseline information from EA Application now included in Section 4.5.3. Results from 2021 field work will be presented in the 2021 Wildlife Baseline Report and used to update the WMMP Plan.	31-Oct-21
64	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5.1	Furbearers - Pre-Construction Surveys	"American marten, and fisher denning habitat (Table 4.1-1;" Table 4.1-1 is the table for *Adaptive Management Response for Amphibians* . Please revise this.	The table reference has been corrected to Table 4.5-1.	31-Oct-21
65	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5.1	Furbearers - Pre-Construction Surveys	"sensitive time periods (February – June; Table 3.2-1)," Please provide specific start and end dates is this 1st Feb to 30th June	Text edited. Specific dates are in Table 4.5-1	31-Oct-21
66	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5.1	Furbearers - Pre-Construction Surveys	"Groundbased surveys include simply searching the forest for suitable old, dead, standing trees that function as dens." As above, please include more species-specific habitat detail as this description does not account for all species denning and resting site characteristics that you have listed. Please update to include this information.	A description of the methods to be used for pre-clearing surveys for furbearers has been added to Section 4.5.2.1 Pre-Clearing Surveys for Furbearers.	31-Oct-21
67	12-Aug-21			LDN/UFN	WMMP	Section 4.5.1	Furbearers - Pre-Construction Surveys	In addition please suggest a survey method as searching the forest is not an effective survey method, unless it has transect spacing ect.	A description of the methods to be used for pre-clearing surveys for furbearers has been added to Section 4.5.2.1 Pre-Clearing Surveys for Furbearers.	31-Oct-21
68	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5.1	Furbearers - Pre-Construction Surveys	"Furbearer dens will be recorded incidentally along with habitat suitability ground surveys prior to construction." Hab suitability or den surveys or both? Incidentally, implying they won't be focused on finding dens, but will record their observations if they find one haphazardly? Again a proper survey using good methodology is required.	A description of the methods to be used for pre-clearing surveys for furbearers has been added to Section 4.5.2.1 Pre-Clearing Surveys for Furbearers.	31-Oct-21
69	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5.2	Furbearers - Mitigation for Furbearers	"Should buffer zone not be possible, mitigation measures would be determined based on site-specific characteristics including the size of the feature, the species involved, and the intensity level of planned activities." Rescheduling work is also an option if the QP deems mitigation measures are not sufficient (P 23h)	A reference to rescheduling work has been added to Section 4.5.2 (Mitigation for Furbearers).	31-Oct-21
70	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.5.4	Furbearers - Adaptive Management for	Furbearers may not call for a formal follow-up plan per the **DS**, but they require an adaptive management plan per P 23 and 3 based on my understanding. The requirements are outlined in P 3.	An adaptirve management program has been added for furbearers in Section 4.5.3 (Monitoring of Mitigation Effectiveness).	31-Oct-21
71	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6	Grizzly - Overview	"Annual meetings regarding grizzly bear management will be organized by BW Gold with FLNRORD, the Southern Dakelh Nation Alliance, and other Indigenous groups who wish to participate (P 23.F)." More specific on timing? Please provide summary of baseline data including baseline habitat and observation mapping.	Baseline information from EA Application now provided in Section 4.6 and baseline data from 2021 will be added in the next version of the WMMP. The timing of the annual meetings regarding grizzly bear management has yet to be developed.	31-Oct-21
72	12-Aug-21			LDN/UFN	WMMP	Section 4.7	Grizzly - Overview	Please explain that you intend to update the habitat mapping for Grizzly as mentioned in P 23d and how this will be achieved, i.e. Project Site will be confirmed or updated for the use of the Project Site by grizzly bears and moose prior to Construction at the Project Site, and in consultation with Aboriginal Groups. This must include: i) consideration of habitat identified through the Terrestrial Ecosystem Mapping of the Project Site contained in the Application and identification of the habitat types requiring further assessment; ii) identification of methods to be used to acquire the information, including consideration of applicable Resources Information Standards Committee guidance documents and other information made available to the Holder;	Field surveys were conducted to validate and update HSM as part of pre-construction work (2021). Habitat assessment now described in Section 4.6.1	31-Oct-21
73	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6.2	Grizzly - Mitigation for Grizzly	"Federal Condition 8.10 and EAC 23.C indicate that if an active grizzly bear den is identified, that a buffer distance will be established taking into account FLNRO (2014), however that document does not specify a setback buffer for grizzly bear dens." They specify a minimum setback distance plus other measures in Compendium. We request remote camera monitoring plan should an active bear den be discovered.	There are setbacks defined in Table 3.3-1 for grizzly bear based on the Compendium guidelines (FLNRO 2014). Camera monitoring has been added to Section 4.6.3.3 (Monitoring of Den Site Mitigation Effectiveness).	31-Oct-21
74	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6.2 TABLE	Grizzly - Mitigation for Grizzly	Propose to replace "...high-elevation slopes during the critical period." with "alpine, subalpine, or montane environments" or similar as it is more descriptive and related to the sites location. Alternatively, provide more detail with respect to the Project worksite.	The Text in Section 4.6.2 (Mitigation for Grizzly Bear) has been updated to include the proposed text "alpine, subalpine, or montane environments".	31-Oct-21
75	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6.2	Grizzly - Mitigation for Grizzly	Compendium lists numerous field-level mitigation measures that can be included in this section. These include: 3.4.3. Wildlife fencing (including electrification if required), 4.3.3. Incorporate bedding areas and mark trails that are located adjacent to seasonally important habitat features into reserve designs (e.g. within windfirm forested buffers), 4.3.4. Stop work immediately in areas where adult females with cubs are observed using seasonally important habitats, 8.8. Do not allow pets in camps or other facilities, 8.10. Treat all machine maintenance sites as potentially attractive to bears (lubricants, etc.). These BMPs should be listed, please add? Same goes for the other sub-component plans. These measures are all listed in Compendium and this shows a commitment to meeting DS 8.9.1.	DS 8.9.1 is specific to identifying sensitive time periods for wildlife species, including grizzly bear. Section 4.6.2 Mitigation for Grizzly Bears provides an overview of mitigation measures specific to grizzlies. The majority of mitigation measures (e.g., no littering, no feeding wildlife, etc.) are listed in Section 3, where they pertain to multiple species.	31-Oct-21
76	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6.3	Grizzly - Follow-up Program	"The kokanee salmon spawning streams are an important source of food for grizzly bears in the fall. This area will be monitored for ongoing grizzly bear presence via deployment of a remote camera" Please provide more detail in regard to the monitoring plan per P 23, timing, camera number, or how you will adapt the sampling if you don't currently have enough detail to work with.	A camera monitoring program to determine grizzly bear usage of kokanee salmon spawning streams has been added in Section 4.6.3.4.	31-Oct-21

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77	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6.3	Grizzly - Follow-up Program	Grizzly may not call for a formal follow-up plan per the DS, but they require an adaptive management plan per P 23 and 3. The requirements are outlined in P 3.	Adaptive management measures has been added to Sections 4.6.3.2, 4.6.3.2 and 4.6.3.4	31-Oct-21
78	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.6.1	Grizzly - Pre-Construction Surveys	Typo: "Denning habitat will be identified via HSM (P 23.D) and confirmed" Please choose either "23.H" or "23h" format and edit references throughout the document accordingly.	The text has been updated to "23.H" format throughout.	31-Oct-21
79	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.1	Birds - Pre-Construction Surveys	"confirmed via a follow-up monitoring program, see Section 4.1.7.2;" Section 4.1.7.2 does not exist.	Updated to point the reader to Section 4.7.2, (Mitigation for Birds).	31-Oct-21
80	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.1	Birds - Pre-Construction Surveys	"to identify any additional mitigation measures required during construction (Table 4.1-1 and 4.1-3);" Table 4.1-1 is the table for Adaptive Management Response for Amphibians. This table is referenced in other sections of the WMMP that have nothing to do with amphibian management. Table 4.1-3 does not exist.	Addressed - deleted reference to tables.	31-Oct-21
81	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.1	Birds - Pre-Construction Surveys	"Habitat suitability model validation for interior forest birds (based on fisher habitat modelling)," The DS condition calls to validate the applicability of the fisher hab model, not validate the bird model based on the fisher model. Propose to quote the condition to prevent confusion we assume this is what you mean.	The text has been updated to quote from the condition.	31-Oct-21
82	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	Please update the ECCC Avoidance Guidelines reference as it is a broken link.	Updated the link, and put in additional link to another ECCC site (avoiding harm to migratory birds).	31-Oct-21
83	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Planning, pre-clearing surveys and setbacks during vegetation clearing." Perhaps change Planning to 'Conduct'.	The text has been updated in Section 4.7.2 to make it clear that "planning" is a phase of the mitigation actions.	31-Oct-21
84	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	Why aren't there mitigation measures specific to the listed species at the beginning of this section other than those in the Follow-up section? Meaning, for Yellowlegs, nighthawk, olive-sided flycatcher, etc?	The same mitigation is applied to all species, so if separated by species, the text would just repeat.	31-Oct-21
85	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Planning for avoidance will occur in areas identified through habitat suitability mapping as a sensitive location for breeding birds." How will HSM account for nesting habitat of all these species? Is this statement specific to certain species? Can you clarify if you have speceis specific HSM and how these models were constructed, baseline data was collected a long time ago are the HSM based on this data?	The text in Section 4.7.2 has been updated to make it clear that HSM will be used to identify what groups of birds are likely present and focus mitigation action to that species group.	31-Oct-21
86	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Pre-clearing surveys will be conducted by personnel who are competent in survey methods and can recognize indicators of bird nesting behaviour from a distance." Point counts are not very appropriate for bird nest surveys. We highly recommend including the BC Hydro Site C nest survey methodology developed by Strategic Resource Solutions (SRS; 2016) in this list. It includes survey methods specific to this type of work. Propose change in language to include "surveys will be led by a QEP with expertise in ornithology" and similar should be added to the other sections referencing RISC surveys.	Text has been updated in Section 4.7.2 to include the referenced document and discuss pre-clearing surveys in greater depth.	31-Oct-21
87	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Walking transects in open environments (e.g., around wetlands or waterbodies);" Requires more detail. Distance between surveyors, time of day, appropriate weather conditions? Please include mention of low-intensity ground sweeps.	Text has been updated in Section 4.7.2 to discuss pre-clearing surveys in greater depth.	31-Oct-21
88	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"...pre-clearing surveys are conducted typically up to 2 weeks prior to vegetation clearing during sensitive periods if clearing cannot be feasibly conducted at another time." the 2-week duration is the longest post-survey clearing window I have ever seen for a critical period. This should be revised acording to guidelines or please provide a reference here.	Addressed in text - put before clearing.	31-Oct-21
89	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Site-specific buffer distances will be established based on the species present, habitat type, and intensity level of the planned activity." Include a table with buffer distances per bird species or family found in the baseline survey. Buffer distance guidelines are in Section 3.5 of Birds in Compendium. This is a basic component of every WMP this needs to be added.	This is included in Table 3.3-1.	31-Oct-21
90	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Reporting in the WMMP Report will include the outcome of the nest and the buffer distance that was" Also to include spatial data and QEP rationale if industry standard setback distances were not applied per 23c.iii. Also to include "...detailed records of efforts undertaken to avoid incidental bird takes..." in the WMMP report (e.g., spatial data, such as survey tracks, database of observations incl. species and nest status, and associated reporting).	Additional text from the provincial condition has been added into 4.7.2 to address this issue.	31-Oct-21
91	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Buffers will be clearly marked with flagging tape, actual nests will not be marked;" What color/pattern of flagging tape? Document should include ribbon scheme or reference one in the CEMP. This is important to distinguish birds, dens, etc. from riparian management zones, for instance.	This will be determined at the time, to ensure a unique colour/pattern is used.	31-Oct-21
92	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Mitigation Measures for Birds	"Nests may be monitored as frequently as weekly to determine whether the nest is still active." Should include more detail in regard to active nest monitoring (higher frequency or throughout potentially disturbing work activities) to ensure the nest is in compliance and that the birds are not disturbed. Please add that nests will be monitored from a distance with spotting scope otherwise you risk disturbing the nest.	Included text to use spotting scope and stay back from the nest. Did not give any other additional details. Frequency will be determined by QP.	31-Oct-21

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93	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"These two predictions have the same measurable outcome – reduction in the number of birds close to the Project site compared to a greater distance away." How great of a distance away? Please add more specific details.	The text in Section 4.7.3 has been updated to describe the locations of test and control plots for birds monitoring.	31-Oct-21
94	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Before sampling will occur prior to substantial construction and for the duration of the construction period." Require a more specific timeline. What is "substantial construction"? Baseline must be established prior to disturbance - certain bird species are easily disturbed and surveys must take place at particular times of year.	Addressed in text, Section 4.7.3.2 "sampling will begin prior to substantial construction to collect additional baseline information before the Project has completed construction.	31-Oct-21
95	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"After sampling will occur every 3 years during the operations and closure periods." Will this capture effects on species distribution and dynamics if the vast majority of initial habitat destruction (e.g., forest clearing) and sensory disturbance occurs earlier in the project? We propose an increased frequency during construction phase (annually).	Surveys are proposed annually for the construction period, and then every three years during operation and closure periods. Text was updated to include collection of baseline data within 500 m of the future edge of the Project footprint.	31-Oct-21
96	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	Where will the impact sites be located? -100 meters (inside the worksite) and 0 meters (worksite edge)? Some species will prefer the mine site versus habitat available prior to construction (e.g., potentially nighthawk and killdeer, for example). How many samplings sites will there be?	Added in text - impact sites will include the footprint and up to 200 m outside of the footprint for forest/grassland surveys, common nighthawk surveys, and swallow/swift surveys. Number of sampling sites added in to text.	31-Oct-21
97	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Surveys for water birds will include ground-based counts of water birds at wetlands, streams and ponds both close to Project and at a greater distance." Please include a distance in meters.	The text in Section 4.7.3 has been updated to describe the locations of test and control plots for birds monitoring.	31-Oct-21
98	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Surveys for swallows and swifts will likewise be conducted both near and far from the Project, with a target of 50 sampling stations." It would be better to specify how each survey will be sampled, so something like a systematic sample of 50 within potential habitat, or systemtic within the whole area.	The text in Section 4.7.3 has been updated to describe the locations of test and control plots for birds monitoring.	31-Oct-21
99	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Surveys for nighthawks will use ARUs placed in wetlands both near and far from the Project with a target of 20 sampling stations." Again this doesn't give enough detail regarding how you will sample this is a required feature of the whole document	The text in Section 4.7.3 has been updated to describe the locations of test and control plots for birds monitoring.	31-Oct-21
100	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Surveys for owls will focus on forest-living owls because the Project is largely located in forested environments, with a target number of samples of 20 stations. Survey methods will be based on Inventory Methods for Owl Surveys, Version 1.0. (RISC 2006)." No mention of survey distribution, timing, etc. of ARU monitoring. Requirements for these bird follow-up plans are outlined in the federal conditions. The short-eared owl has a breeding and foraging habitat preference for open areas - how does focusing on forest owls mitigate risk to this threatened species? Please provide additional detail and a rationale regarding how owl surveys will be performed to meet the DS and P requirements.	Removed owl section. Short-eared owls are the only owl species of concern, and they are a grassland species. There is no suitable habitat for them near the Project area. As such, monitoring is not needed.	31-Oct-21
101	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Any reports of incidental take (destruction of nests) of bird nests, including the species, habitat, and mitigations applied" Referring to measures that did not adequately protect the site? Include work activities and outcome in reports.	Text updated in Section 4.7.3.11 to describe the process of reporting any bird mortality, the circumstances and any new or updated mitigation that was conducted.	31-Oct-21
102	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Assessment of bird incidents (e.g., causes of collisions or mortalities)." and the following point concerning analysis -- this is to be reported by the QEP and not the person who witnessed/caused the incident? Just to clarify: personnel submit incident reports, a QEP follows-up with an assessment of the incident, and this is included in the WMMP?	Addressed in Section 4.7.3.11.. Yes, the reporting procedure outlined is correct.	31-Oct-21
103	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Monitoring program conducted for the first three years after construction of the line, at which point need for the program will be reassessed;" Reassessed based on what criteria? This is a monitoring plan and required specific adpative management triggers per P 3.	Removed text that it will be reassessed.	31-Oct-21
104	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Conduct transect searches for bird carcasses at designated monitoring locations." Frequency of one week seems reasonable, but bird carcasses resulting from T-line collision or electrocution may be eaten or moved by wildlife. Best elaborating here to include bird sign more broadly (e.g., feathers, parts) and to include predator sign as well.	Text updated in Section 4.7.3.6 to include bird sign more generally.	31-Oct-21
105	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.2	Birds - Follow-up Program	"The EA predicted the transmission line may pose a mortality risk for birds due to line-strikes. Mitigation measures to minimize the risk to birds are discussed in Section 3.4." there is one mitigation measure there. Providing additional bird-specific measures in this section, even ones to be triggered by adaptive management from your APLIC reference, would be ideal and show foresight with respect to the program. Without listing adaptive management measures, us reviewers have no idea what is meant by "take additional action" or similar and are required to ask for more information.	Added text to Section 4.7.5, to include potential adaptive management measures for birds if mortality for birds is discovered due to the transmission line.	31-Oct-21
106	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"This literature review will be shared with the Nadleh Whut'en and Stellat'en First Nations. Based on the results of this literature review, a decision will be made as to whether any monitoring programs are required."please provide some indication of when this will happen.	Addressed in text - will be shared the Nadleh Whut'en and Stellat'en First Nations within the first two years of the construction period.	31-Oct-21

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107	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"Clark's nutcrackers will be monitored to assess their use of whitebark pine in the Project area." The same concerns regarding other follow-up monitoring plans. Please indicate sampling strategy (how will the point counts be dispersed, methods etc, also mention sampling time specific for each action or reference the table containing this information. Will fieldwork coincide with peak of whitebark pine cone harvest? First year needs to occur prior to full-on consutrction and similar to other monitoring plans, we propose incrasing frequency for first few years as the Project escalates to operational phase (annual). It seems as though the most disturbance aside from forest clearing will occur during the construction of base Project infrastructure and these ~2 early years of construction. If this is the case, monitoring Clark's nutcrackers more closely during early stages is important to minimize potential impacts on the dispersal of whitebark pine seeds. Please provide references for the surveys specific to	The text of the monitoirng program for Clarck's Nutcracker has been updated in Section 4.7.3.7 to include more detail on the monitoring program.	31-Oct-21
108	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	Instead of providing a table of adapative management specs, we feel it would be beneficial to keep everything organized per monitoring plan / species. This includes monitoring plan overview and details (perhaps in a 1 column, 5 row table as mentioned in a Section 4 comment), plus the management plan triggers and additional measures (perhaps in a 6th row. It is important that all relevant information is organized concisely within species-specific sections so that the protocols can be followed and adapted by the EM.	Tables have been inserted for each species or species group as suggested.	31-Oct-21
109	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"• A trend of fewer birds within 100 m of the Project footprint • Bird mortality on the transmission line, but less than 5 birds per year. • A trend of fewer Clark's nutcrackers following construction of the mine in the Impact block. • Fewer than 10 records of water birds on Project ponds per year. • Bird nests in buffer zones fledge normally during construction." Fewer birds in general within 100 m? These actions need to be species specific What is meant by "10 records"? I am assuming sightings of waterbirds irrelevant of flock size? "Project ponds" meaning the TSF, please be more specific. "fledge normally" if it is normal, why would you need additional mitigation measures please revise these? Hiring a different QP (a specifialist) should be listed as an adaptive measure if nests are failing even after protections are implemented.	More detail added to Section 4.7.3. Text revised in Section 4.7.5. Project ponds specifics addressed in the study area section of survey. Did not include hiring a different QP, as other mitigation measures should be used first (such as increasing buffer width).	31-Oct-21
110	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"• Between 10 and 100 records. The medium and high thresholds should be lowered to 15 and 20, respectively as these threshhold are potentially dangerous to the bird species in question. It is important to keep birds off this potentially harmful pond.	The triggers for adaptive management have been updated throughout Section 4 so that they are species or group-specific, rather than based on being statistically detectable.	31-Oct-21
111	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.7.3	Birds - Follow-up Program	"• Implement new mitigation if necessary" I find this language quite confusing as it seems to imply that monitoring triggers don't necessarily require additional action. This language is used throughout the document please revise and replace with more proactive measures throughout.	Table was deleted; text no longer exists.	31-Oct-21
112	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	**Section 4.8**	**Plant Species and Ecosystems at Risk**			31-Oct-21
113	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9	Monitoring of Mitigation Measures	Table 4.9-1: Reference "WMMP - Section 3.1" under Monitoring Plan, but there is no monitoring plan in Section 3.1. This section is titled *Infrastructure Design Management* and contains mitigation measures to do with the Project site. Further down in the table the authors begin referencing Section 4.1 under Monitoring Plan, but this is the species-specific section for amphibians. The adaptive management requirements (P 3) outlines monitoring program requirements "including methods, location, frequency, timing, and duration".	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
114	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9	Monitoring for Mitigation Measures	Table 4.9-1: I see the benefit in having a summary table like this, but why reference this mitigation table in the species-specific sub-component plan only to send the reader back to a previous section or a different management plan for the monitoring plan? This is confusing and information should be formatted in a specifies-specific manner to better inform environmental staff working at the mine. Again you need to divide based on species and put into the species-specific section?	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
115	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9	Monitoring for Mitigation Measures	Table 4.9-1: RE "Retain coarse woody debris" - monitoring plan reference should be Section 3.3.2. Many of these rows do not have specific sections referenced, this need to be added as these documents are all large and chanllenging to locate information, this table should be more practical to use.	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
116	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9	Monitoring for Mitigation Measures	Table 4.9-1: RE "Avoid the UWR" mitigation measure - Section 3.1 only mentions the mine access road avoiding high elecation UWR on Mt. Davidson. Are there any other activities or areas to mention here?	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
117	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9-1	Monitoring for Mitigation Measures	Table 4.9-1: RE "Management practices to prevent the spread of Chytrid fungus" - should reference to Section 3.2, not 3.1. Would like to see more on the scope and content of reporting concerning mitigation measures of chytrid fungus and how they will be documented. Same with whitenose syndrome.	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21

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118	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9-1	Monitoring for Mitigation Measures	Table 4.9-1: RE "Management practices to prevent the spread of whitenose syndrome"- should reference Section 3.2 and 4.2.	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
119	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9-1	Monitoring for Mitigation Measures	Table 4.9-1: When referencing a monitoring plan outside of this MP, ensure that it meets the conditions of the DS and P conditions, and include an accurate reference to the appropriate section of the document.	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
120	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9-1	Monitoring for Mitigation Measures	Table 4.9-1: RE "Incidental reporting of wildlife" mitigation measure - reference to section 3.3 does not include mention of incidental reporting. Perhaps you meant to reference a different section?	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
121	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9-1	Monitoring for Mitigation Measures	Table 4.9-1: Require more details on installation and distribution of coarse woody debris, include reference to this information if in a different MP.	WMMP Section 4.1 though 4.9 address monitoring of species-specific predicted effects from the EAC Application and monitoring for the effectiveness of mitigation. Section 4.10 presents monitoring for mitigation measures - whether they were conducted, how often, and where. Detailed monitoring programs to confirm mitigation measures are not included.	31-Oct-21
122	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 4.9	Monitoring for Mitigation Measures	"1 Monitoring Plans include: Air Quality and Fugitive Dust Management Plan, Caribou Management and Mitigation Plan, Construction and Environment Management Plan, Invasive Plant Management Plan. Mine Site Traffic Control Plan, Surface Erosion Prevention and Sediment Control Plan" This is the footnote below the mitigation measures table. Why are management plans being listed as monitoring plans?	The plans listed in the footnote of Table 4.10-1 include both mitigation and monitoring programs.	31-Oct-21
123	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 5	Documentation and Reporting	Include more detail on the process and timing for updating and revising the plan, including any consultation with agencies and Aboriginal Groups that would occur in connection with such updates or revisions	Revisions to the WMMP Plan are included in Section 7. Plan Revision.	31-Oct-21
124	12-Aug-21			LDN/UFN	WMMP	Section 5	Documentation and Reporting	**Management on the Project site and its surroundings needs to be spatial this is essential to allow the EM to make informed decisions.** Using simple GIS methods will promote good project management, visualisation and communication through maps of the wildlife managagement actions, sightings and information to staff, stakeholders and government. Using a GIS database to collect and map data is the best way to understand wildlife associations with mining infrastructure and increase the EM capacity to solve wildlife issues efficiently. Please summerise your spatial data managament strategy here, including data recording, data management, and use of GIS software, a simple free GIS software such as QGIS or others are suitable and please mention that GPS's are being used for all data collection.	BW Gold will implement and maintain a spatial wildlife database to promote good project management, visualization and communication through maps of the wildlife management actions, sightings and information to staff, stakeholders and government. Demos of available software solutions that include spatial analysis tools have taken place and BW Gold in the process of selecting a final vendor. Monitoring data and surveys, where possible, will be migrated into the database as well as incidental wildlife sightings by the workforce (to the extent possible). Maps will be generated from the database to support existing annual reporting requirements (e.g. provincial ARR, federal follow-up reporting) and at the request of stakeholders, where reasonable requests are made.	31-Oct-21
125	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 5.1	Documentation	"Details of mitigation actions implemented: dates, personnel, photos, and communications;" Documentation of monitoring results must include the scope, content and frequency of reporting - this could be included in an earlier section. Propose also including reason for implentation/trigger, rationale, and results.	Section 5.1 Documentation is describing the types of data that will be stored, including the mitigation actions. Reports of mitigation actions is not a monitoirng program per se, and does not require all of the detail being requested.	31-Oct-21
126	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 5.1.1	Incident Response Records	More detail needed on how the Proponent will "tabulate and submit the information regarding wildlife observations, wildlife mortalities observed, and significant interactions to ENV, FLNRORD and Aboriginal Groups on an annual basis" and "report on identified risks to wildlife and/or people learned from such monitoring and how such risks will be addressed". Please also mention your use of spatially referenced data.	The text in Section 5.1.1 has been updated.	31-Oct-21
127	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 5.2.2	Federal Decision Statement	In annual report, include "the results of the follow-up program requirements identified in conditions 3.14, 3.15, 3.16, 4.5, 5.5, 6.11, 6.12, 6.13, 6.14, 8.18.6, 8.20.5, 8.21, and 8.22 if required"	This text has been added to Section 5.2.2.	31-Oct-21
128	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 5.2.2	Federal Decision Statement	Include detail on where the annual reports and executive summaries will be published in order to be publicly available (Condition 2.14) - including any updates or revisions to the plan. Proponent shall also notify the Agency and Indigenous groups of the availability of these documents within 48 hours of their publication.	This text added to Section 5.2.2	31-Oct-21
129	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 6	Evaluation and Adaptive Management	"The WMMP will be updated to reflect changes in regulations, best management, and site conditions (see Section 1.4)" - There is no Section 1.4?	Updated to point the reader to Section 1.3	31-Oct-21
130	12-Aug-21	Indigenous Communities		LDN/UFN	WMMP	Section 6.1	Analysis and Evaluation	"WMMP implementation, including monitoring surveys, analysis of results, and evaluation of effectiveness of the program, will be undertaken by a designated independent environmental monitor (QP), as described in DS Conditions 9.1 through 9.3 and EAC Condition 12." Please clarify what is meant by this - that the IEM will monitor the BW Gold's implementation of the WMMP?	That is correct, the IEM will monitor BW Gold's implementation of the WMMP Plan.	31-Oct-21

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131	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Secion 1.3	Adaptive Management Framework	"Annual meetings regarding moose and grizzly bear management, organized by BW Gold, with the Southern Dakelh Nation Alliance, FLNRORD, and other Indigenous Groups who wish to participate (e.g., after submission of the annual WMMP Report (Section 5.2; P 23f). - These meetings will include discussion of wildlife initiatives established by the Hubulhsooninats'uhoot'alh: Foundation Framework Agreement (July 22, 2018). When relevant, BW Gold will provide a workplan detailing participation in those initiatives; any monitoring or mitigation actions will be incorporated into the WMMP (P 23g). Specific consultation will also be conducted with the Stellat'en First Nation and FLNRORD to address any potential access management issues in the Stellako Wildlife Management Area (WMA), including possible monitoring of Project-related effects and offsetting effects if needed (MT 6-30, 9-35)." CSFNs also have an G2G agreement - would like to understand what initiatives are involved in their program.	The province has made it a requirement in the EAC for BW Gold to review wildlife initiatives established by the Hubulhsooninats'uhoot'alh: Foundation Framework Agreement. The EMC is an appropriate table for these reviews to occur, while also hosting annual moose and grizzly managmet meetings. While BW Gold is not familier with the CSFN's G2G agreement and the initiatives that are built in to it, we are willing to explore how any initiaitves might be integrated into the wildlife conversation at the EMC table, pending thier relevance to the project. BW Gold suggests that a direct conversation be had between the CSFNs and the provicial government agencies to understand the components of the various G2G agreements and how the initives might align with the requrements of the EAC.	31-Oct-21
132	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Secion 1.3	Adaptive Management Framework	"Annual meetings regarding moose and grizzly bear management, organized by BW Gold, with the Southern Dakelh Nation Alliance, FLNRORD, and other Indigenous Groups who wish to participate (e.g., after submission of the annual WMMP Report (Section 5.2; P 23f). - These meetings will include discussion of wildlife initiatives established by the Hubulhsooninats'uhoot'alh: Foundation Framework Agreement (July 22, 2018). When relevant, BW Gold will provide a workplan detailing participation in those initiatives; any monitoring or mitigation actions will be incorporated into the WMMP (P 23g). Specific consultation will also be conducted with the Stellat'en First Nation and FLNRORD to address any potential access management issues in the Stellako Wildlife Management Area (WMA), including possible monitoring of Project-related effects and offsetting effects if needed (MT 6-30, 9-35)." Moose and Grizzly Bear Management is also important to CSFNs. How will moose/grizzly bears be monitored?	The monitoring program for moose and grizzly bears has been updated in the final version of the plan.	31-Oct-21
133	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 1.3, Table 1.3-1	Adaptive Management Trigger Framework	Who determines the thresholds associated with the triggers?	The first version of the WMMP Plan used a generic set of thresholds and triggers that were meant to be used across all VECs and VSECs. Following comments on Version 1 of the plan, the thresholds and triggers have been updated to be species-specific. Proposed triggers and thresholds are included in the final version of the plan.	31-Oct-21
134	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 1.3.1	Guidelines and Best Management Practices	"RISC have published standards for surveying key wildlife species and groups in the province (RISC 2007)" Is this where the adaptive management monitoring thresholds come from?	RISC does not provide adaptive management thresholds. As discussed above, the thresholds and triggers have been updated in the final version of the plan.	31-Oct-21
135	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 2.2	Related Documents	[Highlighted] "Monitoring data from the WMMP Report will inform the Country Foods Monitoring Plan (EAC Condition 41) and the End Land Use Plan" *Only highlighted. No comment attached*		31-Oct-21
136	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 2.3	Incident Identification	"Wildlife sightings, interactions, incidents, and mortalities will be recorded and reported to the EM, and included in annual reports (P 23n, MT 11-21; Section 5). A wildlife sightings log will be maintained throughout all Project phases (MT 9-25)." I could see people being complacent in this.	BW Gold has committed to an awareness and training program related to wildlife. Part of this program will provide the background on why reporting observations is important. Training is designed to prevent complacency in reporting.	31-Oct-21
137	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.1	Infrastructure Design Management	"Recreation trails are not located in sensitive habitat, including grizzly bear or caribou habitat (MT 8-19, 9-17, 11-26, 13-18, 14-16);" Does BWG have spatial layers with Grizzly Bear habitat?	Grizzly bear habitat was mapped using Habitat Suitability Mapping, based on the Terrestrial Ecosystem Mapping (TEM) during the baseline for the Project. As part of provincial condition 23.d, BW Gold conducted habitat suitability field plots during the summer of 2021 and will be testing and updating this habitat suitability mapping, as needed.	31-Oct-21
138	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.2, Table 3.2-1	Wildlife Sensitive Periods and Associated Mitigation	"Furbearers and Grizzly Bear - Guideline Buffers (m)" Is 60 m adequate for Grizzly Bear?	60 m represents the minimum buffer size for grizzly. The WMMP includes a risk-based assessment for setting the setback buffer. The buffer may be much larger for higher risk activities such as blasting, and smaller for low risk activities such as storage of equipment. The WMMP states: "Detailed management actions, including buffer zones, will be outlined on a site-specific basis following a risk-based assessment of the species in question, the habitat, and the type of Project activity and its potential to disturb wildlife. Management decisions will be made in consultation with Indigenous groups (DS 4.5, 8.10) and relevant authorities (P 23c, 23h, DS 4.1, 8.9, 8.10, 8.11, MT 10-22)."	31-Oct-21
139	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.4	Transmission Line Management	"The transmission line alignment will be located in disturbed areas while avoiding wetlands and other areas of high bird activity" It's not totally in disturbed areas (around the Nechako River crossing)	The choice of transmission line option (of three optons) and routing will be made preferentially to avoid undisturbed areas, placing the transmisison line in disturbed (e.g., forestry cutblocks) wherever possible.	31-Oct-21

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140	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.4	Transmission Line Management	"Maintaining vegetation under the transmission line right-of-way to a minimum height of 1 metre from the ground, except where not feasible for safety reasons (e.g., at the location of the tower bases, guy anchor points and along the transmission line access roads; P 23l, DS 8.7);" Will this be VIA manual brushing?	Brushing may be manual or mechanical based on the location. In both cases, the objective will be to maintain a 1 metre height above ground (post-construction) to preserve habitat for wildlife.	31-Oct-21
141	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.4	Transmission Line Management	"Addressing any potential access management issues in the Stellako Wildlife Management Area (WMA), including possible monitoring of Project-related effects and offsetting effects if needed," Are there any other WMAs?	There are no other Wildlife Management Areas along the Transmission Line Routing.	31-Oct-21
142	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.5.1	Tailings Storage Facility Mitigations	"Sound deterrents (e.g., air cannons) provide a cost effective primary deterrent option;" Assuming the sound is not loud enough to travel and disturb other wildlife?	The tradeoffs between effectively deterring birds while avoiding disturbance to other wildlife will need to be taken into account when choosing and placing bird deterrent systems. BW Gold will include consideration of this tradeoff in the next version of the WMMP.	31-Oct-21
143	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.6.3	Road Condition Management	"Roadsides will be revegetated with species that avoids attraction of wildlife (e.g., no clover or other highly palatable species), as detailed in the Vegetation Management Plan (MT 6-26, 8-11, 10-14, 11-13, 14-10, 8-10, 9-18, 10-18, 11-12, 13-16, 14-9);" Native species?	Yes, the use of native species for revegetation is discussed in the Vegetation Management Plan.	31-Oct-21
144	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.7	Aircraft Management	"Maintaining sufficient height above ground, when safe, to minimize disturbance to caribou. This includes 400 m (1,300 ft) altitude above the Ungulate Winter Range (BC MFLNRO 2014)." Is this adequate?	400 m elevation above ground is the recommended distance in the Compendium of Wildlife Guidelines for Northerm BC (BC FLNRO 2014).	31-Oct-21
145	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 3.9	Ecosystem and Plant Species Management	"Plant management relevant to wildlife also includes limitations of herbicide use (compliance with the Stellat'en First Nation use policy in Stellat'en territory; MT 5-25)." This would also apply to Saik'uz and Nadleh territory as well	Saik'uz and Nadleh territory will be included as part of the compliance area regarding the policy as well.	31-Oct-21
146	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4	Species-Specific Monitoring and Adaptive Management	"If these monitoring programs indicate that there is no observable effect or a low effect on the species group due to the Project, the program may be discontinued following consultation with the EAO, FLNRORD, Indigenous groups or the Environmental Monitoring Committee." At which point? Is there a certain amount of years where data has to be colleted before this is determined?	No set time limit is proposed. The objectives for many of the monitoring programs is to test the predictions made in the EAC Application. If monitoring programs are showing a result (either positive or negative) and that result is not changing through time, then the objective of monitoring can been seen to be met. At that point, BW Gold will discuss the monitoring results and discuss the future of the program with the EAO, FLNRORD and Indigenous groups or the Environmental Monitoring Committee.	31-Oct-21
147	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.1.4	Adaptive Management for Amphibians	[Highlighted] "Installation of toad tunnels under roads to guide toads under roads." *Only highlighted. No comment attached*		31-Oct-21
148	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.4	Moose	"Moose (Alces alces) are provincially yellow listed (not at risk, CDC 2021) and are afforded protection as wildlife under the *Wildlife Act* . Moose are of cultural value to Indigenous Groups and regionally important for game hunting. No specific sensitive timing windows or pre-clearing surveys are required for moose. Annual meetings regarding moose management will be organized by BW Gold with FLNRORD, the Southern Dakelh Nation Alliance, and any other Indigenous Groups who wish to participate, see Section 1.4." See other comment* CSFNs have interests in moose mgmt	CSFNs are considered one of the Indigenous Groups, as defined in the EAO EAC condtions and as such, will be included in all moose management meetings and project directed initiatives. This will likley occur throught the EMC table.	31-Oct-21
149	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.4.1	Pre-Construction Surveys	"Pre-construction surveys for moose will include: habitat suitability mapping, surveys for mineral licks and trails." Who is doing the suitability mapping?	BW Gold employed wildlife biologists and First Nations technicians with experience in the region to conduct the habitat suitability mapping.	31-Oct-21
150	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.4.2	Mitigation for Moose	"Minimizing limiting new access for harvesters and wolves along roads" Is there a way to reduce sightlines on access?	Sightlines can be limited along access roads by curving the road, allowing roadside vegetation to grow up, and limiting the width of the cleared right of way. A combination of these techniques will be used, where appropriate with new access roads. Note that maintaining sight lines may be required for the safe operation of the road. In those cases, a compomise will be made between maintaining sight lines on higher traffic volume roads, and limiting sight lines on lower useage roads.	31-Oct-21
151	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.5.1	Pre-Construction Surveys	"Identify denning habitat features, including suitable trees, snags, or coarse woody debris piles to be buffered for the sensitive period; and" Dens for furbearers should be protected as much as possible as they are RARE habitat features on the landscape	Furbearer dens will be protected following the mitigation hierarchy: - Avoidance by preferentially clearing outside of the denning periods, - Mitigation by conducting pre-clearing surveys if clearing must occur in the denning period, and then establishing setbacks if a den is discovered. Please see WMMP Section 3.3.1 for more information.	31-Oct-21

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152	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.5.1	Pre-Construction Surveys	"Furbearer dens will be recorded incidentally along with habitat suitability ground surveys prior to construction." Would be interested in this data.	BW Gold will be producing a 2021 Wildlife Baseline Report with all data collected during pre-construction surveys.	31-Oct-21
153	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.5.4	Adaptive Management for Furbearers	Is there nothing for Fisher? they are being evaluated on whether they are endangered or not.	The monitoring program for furbearers has been updated in the final verison of the WMMP Plan, Section 4.5.3.	31-Oct-21
154	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.6	Grizzly Bear	"Annual meetings regarding grizzly bear management will be organized by BW Gold with FLNRORD, the Southern Dakelh Nation Alliance, and other Indigenous groups who wish to participate (P 23.F)." Again, inclusion of CSFNs	Yes, CSFNs are included. See comment response from 148	31-Oct-21
156	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.6.3	Follow-Up Program	"The kokanee salmon spawning streams are an important source of food for grizzly bears in the fall. This area will be monitored for ongoing grizzly bear presence via deployment of a remote camera (MT 11-5). Monitoring for grizzly bear throughout the Project area will occur via the incidental wildlife sightings, interactions, and incidents reporting program. Logs of grizzly bear sightings, interactions, and incidents will be used to identify need for adaptive management actions." Should use TK for this*** Grizz Study @ Tatuk	BW Gold is open to collaborating on research and monitoring objectives and inclusion of any avialable TK information.	31-Oct-21
157	6-Oct-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.6.3	Follow-Up Program	"The kokanee salmon spawning streams are an important source of food for grizzly bears in the fall. This area will be monitored for ongoing grizzly bear presence via deployment of a remote camera (MT 11-5). Monitoring for grizzly bear throughout the Project area will occur via the incidental wildlife sightings, interactions, and incidents reporting program. Logs of grizzly bear sightings, interactions, and incidentswill be used to identify need for adaptive management actions." Would like to have a discussion about the potential of connecting wildlife initiatives	BW Gold is open to collaborating on research and monitoring objectives.	31-Oct-21
158	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.7.3	Follow-Up Program	"A research program studying the potential effects of electromagnetic fields (EMF) on birds will be established in consultation with the Nadleh Whut'en and Stellat'en First Nations (MT 14-27)." And Saik'uz	Saik'uz will be added to the consulted Nations	31-Oct-21
158	27-Aug-21	Indigenous Communities		Kasandra Turbide	WMMP	Section 4.7.3	Follow-Up Program		**Response Addendum:** Section 4.7.3.8 now reads: A research program studying the potential effects of electromagnetic fields (EMF) on birds will be established in consultation with the Nadleh Whut'en, Saik'uz, and Stellat'en First Nations (MT 14-27).	05-Apr-21
159	18-Nov-21	ECCC				-	General comment	For any pre-construction wildlife surveys that have been completed please include, as an appendix, these data and describe how this information links to the adaptive management and the EA conditions including the type of baseline data collected, when, where and the methods used to collect the data, and where these data will be stored.	Pre-construction survey summaries are included now throughout Section 4. Information will be expanded and updated along with the pre-construction baseline report in early 2022.	30-Dec-21
160	18-Nov-21	ECCC				1.2.1, Table 1.2-1, 1.2.1, page 1-2	Legislation	The Migratory Birds Convention Act and Regulations also prohibits the disturbance or injury of migratory birds, their nests and eggs.	The original textis no longer in the WMMP, but this content is noted.	30-Dec-21
161	18-Nov-21	ECCC				1.3.1, page 1-6; 4.7.2, Page 4-19	ECCC's Avoidance Guidelines	ECCC notes that there are several references to outaded migratory birds avoidance guidelines throughout the report. ECCC recommends using current guidance for avoiding harm to migratory birds: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html	The citation for Avoidance Guidelines in the WMMP is now: ECCC. 2021a. Avoidance Guidelines. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html (accessed December 2021).	30-Dec-21
162	18-Nov-21	ECCC				2.1, page 2-1	Training	ECCC recomends including education on incidental take for migratory birds and ensuring employees and contractors working 'on the ground' are familiar with ECCC's Avoidance Guidelines (https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html)	The employee training and awareness program avoiding harm to migratory birds. For all wildlife, general content to reduce risks during sensitive periods includes: *- Reporting protocols for wildlife sightings and incidents (Section 2.3). This includes reporting of habitat features (e.g., nest, den, mineral lick; MT 9-21, 13-5);* *- Wildlife sensitive locations and reduced risk timing windows as applicable; e.g., active den, nest setbacks/buffers and environmental feature no-work zones*	30-Dec-21
162	18-Nov-21	ECCC				2.1, page 2-1	Training		**Response Addendum:** The employee training and awareness program Section 2.1 has now been updated to include avoiding harm to migratory birds as a training topic (specifically "Avoiding incidental take for migratory bird nests, including content from ECCC's Avoidance Guidelines (ECCC 2021a)") For all wildlife, general content to reduce risks during sensitive periods includes: - Reporting protocols for wildlife sightings and incidents (Section 2.3). This includes reporting of habitat features (e.g., nest, den, mineral lick; MT 9-21, 13-5); - Wildlife sensitive locations and reduced risk timing windows as applicable; e.g., active den, nest setbacks/ buffers and environmental feature no-work zones	05-Apr-21

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163	18-Nov-21	ECCC				3.1. page 3-1	Lighting	ECCC recommends that blue or green lighting rather than red or white lighting be used wherever possible in order to reduce attractiveness to birds. ECCC notes that lighitng will be directed downwards and suggests that sheilding be used in addition.	Lighting design updates are noted and will be included in the updated WMMP draft in early 2022.	30-Dec-21
	18-Nov-21	ECCC				3.1. page 3-1	Lighting		**Response Addendum:** Lighting colour design updates included in Section 3.1: "Infrastructure design mitigations for sensory disturbance to wildlife include designs limiting use of outside artificial light, with lighting placed only where necessary for safe operation of the Project (P 23k, DS 8.1, MT 7-11, 8-23, 9-4, 10-7)... Light disturbance will also be managed by using...blue or green light instead of white or red, wherever possible to reduce attractiveness to birds"	05-Apr-21
164	18-Nov-21	ECCC				3.10, page 3-11	Restoration, compensation	The plan states that restoration will be conducted progressively, ECCC requests detailed infromation on how timelags associated with compensation and restoration will be addresed in each of the Management Plans listed (CMMP, RCP, WMOP, WPMP) and requests clarification on whether compensation and restoration programs will begin prior to construction to offset for such timelags between habitat loss during construction and return to ecosystem function post restoration.	Details of compensation and restoration programs are not included in the WMMP, so no changes to text have been made. The timing and progress of compensation and restoration programs are under development within the relevant plans (e.g. Reclamation and Closure Plan, Caribou Mitigation and Monitoring Plan, Wetland Management and Offsetting Plan, Schedule 2 and Section 35(2) fish compensation plans) and will be implemented at required timelines during the Project.	30-Dec-21
165	18-Nov-21	ECCC				3.10, page 3-11	Compensation	ECCC requests clarification on why waterbirds are the only group of birds that are included as part of the compensation plan.	The post-closure reclamation (Section 3.10) lists species groups which had these mitigations included in the Master Mitigation Table (created as part of EAC Condition 43 and accepted by the EAO in November 2020). Forest and grassland birds did not have post-closure reclamation listed in the master mitigation table, however they will be added to the list for habitat reclamation post-closure with the updated WMMP in early 2022. Added forest and grassland bird to species considered during reclamation, Section 3.10.	30-Dec-21
165	18-Nov-21	ECCC				3.10, page 3-11	Compensation		**Response Addendum:** This is now Section 3.9 not 3.10	05-Apr-21
166	18-Nov-21	ECCC				3.3.1, Table 3.2-1, page 3-3	Bats	Table 3.2-1 states: "*Establish buffer zones around active hibernacula and active roosts.* " It is not clear that the full potential of hibernacula were considered as only caves in karst are considered in section 4.2 "*In northern areas, such as the Project location, hibernacula typically occur in caves located in karst (limestone) formations. No limestone formations are located in the Project site, and so no hibernacula are expected* ". There are no data to suggest that bats in the majority of BC fly to areas where karst exists in order to hibernate. Research in North America over the last decade shows that bats, and in particular Little Brown Myotis, may hibernate in root wads of trees, talus rock, and cracks and crevices of rock formations. ECCC recommends that the full potential for roosting habitat be considered and appropriate buffers established. Table 3.2-1 also states "*If surveys identify loss of little brown myotis and northern myotis roosting habitat, implement offsetting through roosting structures maintained throughout the life of the mine* " ECCC recommends that roosting structures be maintained until such a time as the habitat lost as a result of the project be restored.	All types of bat hibernacula require that the internal environment must remain stable and above freezing throughout the winter. In the Project Area, which is consistently below freezing throughout the winter, only larger subterranean hibernacula (i.e., caves) can maintain these stable temperatures through winter. However, pre-clearing surveys are conducted at all features marked as suitable bat habitat (including roosting trees and crevices), and will be conducted by experienced observers who will record all bat sign.	30-Dec-21
166	18-Nov-21	ECCC				3.3.1, Table 3.2-1, page 3-3	Bats		**Response Addendum:** Text added to the beginning of Sections 4.2: "In northern areas, such as the Project location, hibernacula typically occur in caves located in karst (limestone) formations which are deep enough to maintain a constant temperature above freezing. No limestone formations are located in the Project site. Some bat species hibernate in habitat such as root-wads, crevices, and tree bark, however these features are not likely to be suitable for hibernation in the Project area due to lack of insulation from extremely cold winter temperatures, of regularly -20 to -30 degrees Celsius." Section 4.2.2 includes mitigation that Roosting structures will be maintained where possible: "Retain trees or "-stands that may support bat roosts; and - Retain key bat habitat resources where possible; - Restore disturbed habitat - restoration will be addressed through the Reclamation and Closure Plan."	05-Apr-21

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167	18-Nov-21	ECCC				3.3.1, Table 3.2-1, page 3-3	Nest Surveys	ECCC does not recommend pre-clearing surveys for active bird nests during the breeding season as this has a high liklihood of disturbing nesting birds and low probability of detecting all bird nests. Mitigation measures for birds need to be updated in order to align with ECCC's current Avoidance Guidelines, which can be found here: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html	The pre-clearing survey methods for birds (Section 4.7.2.1) does not include nest searches for most species, as is consistent with the current Avoidance Guidelines. Determination of birds nesting in an area follows methods consistent with those described in the Avoidance Guidelines, including: *- Point counts in forested environments (Ralph et al. 1993; Environment Canada 2004);* *- Walking transects in open environments (e.g., around wetlands or waterbodies, using low-intensity ground sweeps);* *- Nest searches for conspicuous species, including larger cavity nests (mature forests) and raptor nests (mature or riparian forests, cliffs);* *- Species-specific survey methods will be used in identified suitable habitat for species at risk (Table 4.1-2); and* *- BC Hydro Site C nest survey methodology (Strategic Resource Solutions 2015).*	30-Dec-21
168	18-Nov-21	ECCC				3.3.1, Table 3.2-1, page 3-4, 4.6.2 page 4-15	Grizzly bear	Table 3.2-1 includes a buffer of 60 m for Grizzly Bear, which conflicts with the statement on page 4-15: "buffers will be determined based on site-specific characteristics including the intensity level of planned activities." ECCC recommends that when it is not possible to avoid construction during sensitive periods, a minimum buffer of 150 m be used around potential grizzly bear dens and that the report be ammended to reflect this.	Recommended buffer size minimums for all species were defined using BC MFLNRO 2014, as specifically required throughout the EAC conditions. Text has been updated to specify that buffers will be determined on a site specific basis by a Qualified Professional, including consideration of the den site and proposed activities. BC MFLNRO. 2014. A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia (Interim Guidance). Prepared for British Columbia Ministry of Forests, Lands, and Natural Resource Operations North Area by A. Roberts, Ecological Consulting Smithers, BC.	30-Dec-21
169	18-Nov-21	ECCC				3.3.2, page 3-5	Habitat alteration	ECCC recommends adding the following measure to minimize the overall clearing and ground disturbance during construction: ensure machinery is cleaned properly, and flag designated areas to lay-down tools and machinery.	This mitigation measure will be added to Section 3.3 of the updated WMMP in early 2022. It also needs to be incorporated into the CEMP	30-Dec-21
169	18-Nov-21	ECCC				3.3.2, page 3-5	Habitat alteration		**Response Addendum:** Section 3.3.2 Habitat loss and alteration management now includes text "Minimize overall clearing and ground disturbance during construction by: ... - Flagging designated areas to lay-down tools and machinery"	05-Apr-21
170	18-Nov-21	ECCC				3.4, page 3-6	Transmission Line Mitigation	Section 4.1.7 does not exist in the WMMP. ECCC requests a description of the monitoring program for mitigations to birds caused by transmission lines.	Section 4.7.3.6 describes the monitoring methods for birds along the transmission line.	30-Dec-21
171	18-Nov-21					3.5.1, page 3-8	Tailings Mitigations	ECCC notes that air canons and other mitigation measures to deter wildlife from entering tailings ponds should be considerd as sensory disturbances of the project on wildlife in the LSA.	This information is included in Section 3.5.1: *Several types of effective deterrence methods may be used. The choice of which method to use will depend on what types of species are present, experience on site, and the results of mitigation – which may require cycling different methods, including:* *- Sound deterrents (e.g., air cannons) provide a cost effective primary deterrent option, but are not appropriate for all areas as the sound can disturb other wildlife;* *- Visual deterrents (e.g., representations of predators or humans), which may be used in conjunction with sound deterrents to improve effectiveness if needed; and* *- Physical deterrents (e.g., nets or flotation balls to prevent water access) are most effective in smaller waterbodies such as sediment control ponds.*	30-Dec-21
171	18-Nov-21					3.5.1, page 3-8	Tailings Mitigations		**Response Addendum:** This information is now Section 3.10.3	05-Apr-21
172	18-Nov-21	ECCC				3.5.1, page 3-8	Tailings Mitigations	ECCC recommends that fences be used to deter amphibians from entering waterbodies in addition to nets or flotation balls which are more effective for deterring birds.	Fences are included as suggested adaptive measures if needed to prevent amphibians from accessing Project ponds and/or to guide movement away from areas of higher risk, such as roads and work sites (Section 4.2.3, subsections titled "Adaptive Management Response")	30-Dec-21
173	18-Nov-21	ECCC				3.6.2, page 3-9	Roadways	ECCC recommends additional measures to reduce speed around areas sensitive to wildlife (e.g. wetlands, migration corridores, wildlife crossings, etc.). ECCC recommends that speeds be reduced from the maximum 50 km to a maximum of 20 km in sensitive wildlife areas with high liklihood of wildlife interaction as determined by pre-construction surveys and a QEP. Speed reduction should be communicated via posted signage and enforced throughout all stages of the project.	Refer to existing speed limit in WMMP and Mine Site traffic control plan	30-Dec-21

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173	18-Nov-21	ECCC				3.6.2, page 3-9	Roadways		**Response Addendum:** The WMMP now includes speed limit considerations as part of adaptive management measures regarding wildlife collisions (western toad Section 4.1.3.2, moose Section 4..4.3.2, grizzly bear Section 4.6.3.2). Current measures for avoiding wildlife incidents along roadways include training and awareness, communication of seasonal changes, radio-equipping all vehicles for immediate communication of wildlife presence, reasonable speed limits, and signage in sensitive wildlife areas. Adaptive management measures may include additional reductions in speed limits if specific locations are considered to have an ongoing risk of wildlife/vehicle collisions.	05-Apr-21
174	18-Nov-21	ECCC				3.9, page 3-11	Monitoring	ECCC notes that whitebark pine propogation sufficiency will be determined through monitoring of Clark's nutcracker, ECCC recommends that specific monitoring targets for "sufficient WBP propogation" be determined and that seedling establishment be monitored to assess the effectiveness of mitigation measures.	Details of whitebark pine propogation and seeding are included in the Whitebark Pine Management Plan, therefore no updates to the WMMP text will be made.	30-Dec-21
175	18-Nov-21	ECCC				3.10, page 3-12	Restoration, compensation and closure	Restoration and compensation measure for wildlife are specifically mentioned at the outset of section 3.10, but following that only reclamation measures are described. ECCC requests clarification on the use of the term "reclamation" in section 3.10 and throughout the plan, specifically will reclaimed areas be restored? If is so please update the plan to reflect this.	Habitat restoration will occur during site reclamation post-closure. Additional details for restoration and compenstation activities are included in other management plans (Section 3.10): *Additional comprehensive reclamation measures will be implemented upon mine closure. Habitat restoration upon mine closure will assess appropriate habitats capable of supporting caribou, moose, grizzly bear, and waterbirds and will include consideration of caribou habitat restoration measures in Recovery Strategy for the Woodland Caribou, Southern Mountain Population (EC 2014; MT 8-22, 10-9, 13-21, 14-5, 11-8).* *Compensation/offsetting programs are detailed in other management plans, including:* *- CMMP for offsetting and reclamation measures related to caribou;* *- RCP for measures related to wildlife habitat reclamation and monitoring post-closure;* *- WMOP for measures related to the offsetting and reclamation at wetlands; and* *- WPMP for reclamation measures related to whitebark pine.*	30-Dec-21
175	18-Nov-21	ECCC				3.10, page 3-12	Restoration, compensation and closure		**Response Addendum:** This is now Section 3.9 not 3.10	05-Apr-21
176	18-Nov-21	ECCC				4	Adaptive management	Overall comment: ECCC requests more quantitative thresholds for triggering a management response e.g. what is considered a trend? Please use quantitative deviations from baseline supported by scientific literature to define effects and appropriate adaptive management responses. In addition, power analyses must be conducted prior to establishing monitoring programs to identify the sampling requirements to ensure statistical efficacy. When reporting on adaptive management, baseline data, monitoring data, monitoring thresholds and analysis must be clearly outlined in the plan.	Triggers and Thresholds have been re-worked for all species groups, Sections 4.1 - 4.9.	30-Dec-21
177	18-Nov-21	ECCC				4.1.2, page 4-2	Amphibians	ECCC notes that the statement on page 4-2 is inaccurate and requests the following edits: "Other relevant documents for western toad ~~do not~~ identify sensitive periods, including: - COSEWIC (2012) COSEWIC Assessment and Status Report on the Western Toad Anaxyrus boreas Non-calling population Calling population; - British Columbia (2014) Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia; - British Columbia Provincial Western Toad Working Group (2014) Management Plan for the Western Toad (Anaxyrus boreas) in British Columbia; and - Environment and Climate Change Canada. 2020. Management Plan for the Western Toad (Anaxyrus boreas), Calling and Non-calling populations, in Canada. Species at Risk Act Management Plan." These resources all refer to sensitive breeding and metamorphic stages in the Western Toad lifecycle.	The sensitive period for western toad has been defined as April 1 - September 30, as required by the EAO. The associated quoted text from this comment has been removed in the WMMP.	30-Dec-21
178	18-Nov-21	ECCC				4.1.2, page 4-3	Monitoring	ECCC requests clarification on how many mortality surveys will occur during each survey period (twice per year).	Detailed methods are provided in Section 4.1.3.2. Each roadside survey area will be surveyed once in spring and once in late summer (July).	30-Dec-21
179	18-Nov-21	ECCC				4.2, page 4-4	Bats	ECCC disagrees with the following statement: "*Hibernacula are used October 1st – May 31st for hibernation. In northern areas, such as the Project location, hibernacula typically occur in caves located in karst (limestone) formations. No limestone formations are located in the Project site, and so no hibernacula are expected.* " As mentioned above, bats may use caves, mines, root wads of trees, talus rock, cracks and crevices of rock formations, or buildings as hibernacula. The potential for bats to use other features in the landscape aside from limestone needs to be considered.	All types of bat hibernacula require that the internal environment must remain stable and above freezing throughout the winter. In the Project Area, which is consistently below freezing throughout the winter, only larger subterranean hibernacula (i.e., caves) can maintain these stable temperatures through winter. However, pre-clearing surveys are conducted at all features marked as suitable bat habitat (including roosting trees and crevices), and will be conducted by experienced observers who will record all bat sign.	30-Dec-21

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179	18-Nov-21	ECCC				4.2, page 4-4	Bats		**Response Addendum:** Text added to the beginning of Sections 4.2: "In northern areas, such as the Project location, hibernacula typically occur in caves located in karst (limestone) formations which are deep enough to maintain a constant temperature above freezing. No limestone formations are located in the Project site. Some bat species hibernate in habitat such as root-wads, crevices, and tree bark, however these features are not likely to be suitable for hibernation in the Project area due to lack of insulation from extremely cold winter temperatures, of regularly -20 to -30 degrees Celsius."	05-Apr-21
180	18-Nov-21					4.2, page 4-4	Bats	ECCC notes that migratory bats, silver-haired bat (Lasionycteris noctivagans), eastern red bat (Lasiurus borealis), and hoary bat (Lasiurus cinereus), may soon be assessed by the COSEWIC and listed on Schedule 1 of the SARA.	BW Gold notes this information and will update the WMMP and associated mitigations and management for bats as assessment from COSEWIC is made available. Bat monitoring surveys include summaries of all species detected.	30-Dec-21
181	18-Nov-21	ECCC				4.2, page 4-6	Mitigation for bats	ECCC notes that as stated for amphibians, wetland habitat will be lost due to construction. Wetlands provide foraging habitat for bats including bat species at risk and ECCC requests infromation on how bat foraging habitat will be mitigated and how loss of habitat will be compensated.	Loss and alteration of wetlands has been minimized, and is managed in detail in the Wetland Management and Offsetting Plan. Specific mitigations for bat habitat are focused on loss of roosting habitat; details regarding implementation of these mitigations will be included in the pre-construction baseline report and the updated WMMP in early 2022.	30-Dec-21
182	18-Nov-21	ECCC				4.2.1, page 4-5	Pre-construction surveys	ECCC requests information regarding the wetlands that ARUs will be placed in to determine bat presence. Please specifiy which wetlands, their size and location, and timing of deployment for late fall, summer and spring monitoring. Please also confirm whether there will be a comparative sample size of wetlands, within the mine site and within the mine site buffer for example? Please specify. ECCC also reminds the Proponent that absence of evidence (e.g. sound recordings and bat droppings) is not evidence of absence, particularly in this region where a large roost could consist of 10-50 bats and a non-detect could be a result of many factors and should be taken into consideration when planning surveys. ECCC also recommends consulting BC's Wildlife Habitat Features Field Guide, in addition to the Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia, when identifying potential bats roosts and hibernacula for ARU deployment. (https://www2.gov.bc.ca/assets/gov/environment/natural-resource-policy-legislation/legislation-regulation/frpa-pac/wildlife-habitat-features/whf_field_guide_kootenay_boundary.pdf)	General methods for bat monitoring surveys have been included in Section 4.2.3. Details of the locations and methods for determining habitat loss will be included in the pre-construction baseline report and the updated WMMP in early 2022. BW Gold has incorporated the listed sources into the planning and preparation of bat management for the Project.	30-Dec-21
182	18-Nov-21	ECCC				4.2.1, page 4-5	Pre-construction surveys		**Response Addendum:** Comment is from outdated WMMP version, monitoring details are now clear in Section 4.2.3.	05-Apr-21
183	18-Nov-21					4.2.1, page 4-5	Pre-construction surveys	*"If it is not possible to conduct clearing outside of the sensitive season for bats then pre-clearing surveys would be conducted at these features and mitigation applied including setback buffers." and "Site-specific buffer distances will be recommended by a QP and depend on the species present and intensity level of activity (MFLNRO 2014; Holroyd and Craig 2016)"* ECCC recommends a precautionary approach to set back buffers, and requests clarification on the minimum setback buffer to be used and which BMP guidance will be followed in determining said buffers.	*The Compendium of Wildlife Guidelines for Industrial Development Project in the North Area* is the standard BMP used throughout the WMMP and which will be used for determining setback buffers. However, setback buffers are not listed as exact numbers because the necessary buffer varies depending on the species involved, the site features, and the level of intensity of activities. For example, a small roost site with low recorded bat activity may only be buffered by 100 m for vehicle traffic, while a hibernacula site or a site which is in the vicinity of planned blasting may be buffered by up to 1 km to prevent disturbance. Buffered sites will have follow up monitoring conducted to determine effectiveness of the mitigations, as described in Section 4.2.3.	30-Dec-21
184	18-Nov-21	ECCC				4.2.2, page 4-6	Mitigation for bats	ECCC requests clarification on how far in advance 'pre-construction' surveys will be conducted to determine if roosting habitat will be lost for little brown myotis and northern myotis. Any necessary compensation should be provided prior to any roosting habitat loss from construction. Furthermore, bat boxes are not a satisfactory 'offset' or solution for significant loss of habitat for roosting or hibernacula sites. ECCC recommends wildlife tree conservation/creation (particularly aspen trees), restoration of aspen habitat, and consideration of BrandenBark™, or similar designs, as mitigation measures to offset impacts to bat roosting habitat.	Pre-construction surveys to identify bat roosting habitat were conducted in 2021 and will be included in the pre-construction baseline report and updated WMMP in early 2022. Artificial roosting structures will be installed starting in 2022, coordinated with construction progress and loss of natural roosting features. BradenBark will be considered as a possible roosting structure to be used. Federal condition 8.15 requires that lost roosting habitat be compensated with artificial roosting structures, which was determined to be a sufficient mitigation measure to address habitat loss and alteration for bats during the EA process. Additional measures would be considered as part of adaptive management if monitoring indicates that existing mitigation measures are not sufficient, based on the predicted levels of Project effects and defined thresholds/triggers.	30-Dec-21
184	18-Nov-21	ECCC				4.2.2, page 4-6	Mitigation for bats		**Response Addendum:** Summary of pre-construction information and additional baseline data have been added to Section 4.2.1. Plans for the bat roosting habitat offsets are included in Section 4.2.2 and Appendix E. BW Gold has updated the management plan for bats in response to comments on bats from ECCC on February 28th. Bat boxes are no longer being considered as part of management.	05-Apr-21
185	18-Nov-21					4.2.2, page 4-6	Mitigation for bats	In addition to the above mitigation measures for bats, ECCC also considers a financial contribution to bat research a suitable compensation measure. For example, commitment to fund 5-years of monitoring of a NABAT grid cell in the area could provide useful information to help conserve bats in the region.	Federal condition 8.15 requires that lost roosting habitat be compensated with artificial roosting structures, which was determined to be a sufficient mitigation measure to address habitat loss and alteration for bats during the EA process. Additional measures would be considered as part of adaptive management if monitoring indicates that existing mitigation measures are not sufficient, based on the predicted levels of Project effects and defined thresholds/triggers.	30-Dec-21
185	18-Nov-21					4.2.2, page 4-6	Mitigation for bats		**Response Addendum:** Following comments from ECCC on February 28th, the plan for bat offsetting has been re-written as requested by ECCC to include avoiding roost trees where possible, augmenting wetland habitat, monitoring using NABAT and a research study on bats Section 4.2.2.	05-Apr-21

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186	18-Nov-21	ECCC				4.2.3, page 4-6	Follow-up program	ECCC does not recommend bat boxes as mitigation for loss of bat roosting habitat. If other roosting 'structures' are selected to be used for compensation ECCC should review these plans prior to installation.	Bat boxes are a commonly used and readily available type of artficial roosting structure and were planned as the primary structures for offsetting loss of roosting habitat, as required in federal condition 8.15. BW Gold will further consult with ECCC regarding the ideal types of artifical roosting structures prior to implementation in 2022.	30-Dec-21
186	18-Nov-21	ECCC				4.2.3, page 4-6	Follow-up program		**Response Addendum:** Following comments from ECCC on February 28th, the plan for bat offsetting has been re-written as requested by ECCC to include avoiding roost trees where possible, augmenting wetland habitat, monitoring using NABAT and a research study on bats Section 4.2.2.	05-Apr-21
187	18-Nov-21	ECCC				4.3, page 4-7	Caribou	This section, and associated portions of this plan that relate to caribou, should be updated based on ECCC advice on the Caribou Management and Monitoring Plan (CMMP). Please refer to ECCC comments and correspondance provided on the draft CMMP.	The Caribou section now exclusively refers to the CMMP.	30-Dec-21
188	18-Nov-21	ECCC				4.5.2, page 4-14	Mitigation for furbearers	Please note that American Marten in BC is not listed on schedule 1 of the SARA .The Newfoundland and Labrador population is listed as threatened but it is not found in BC.	This information (Table 4.5-1) will be changed in the updated WMMP in early 2022.	30-Dec-21
188	18-Nov-21	ECCC				4.5.2, page 4-14	Mitigation for furbearers		**Response Addendum:** Table 4.5-1 updated to remove 'Threatened' listing for American Marten	05-Apr-21
189	18-Nov-21	ECCC				4.5.2, page 4-14	Mitigation for furbearers	ECCC requests more infromation on the specific types of mitigation measures that would be implemented if a buffer zone is not possible as stated on page 4-14: "Should buffer zone not be possible, mitigation measures would be determined based on site-specific characteristics including the size of the feature, the species involved, and the intensity level of planned activities"	Mitigation measures would include restrictions on specific work activities, e.g., based on noise and visual disturbance levels. Specific measures would be determined as part of a site-specific management plan, in consultation with regulators and First Nations/Aboriginal Groups.	30-Dec-21
189	18-Nov-21	ECCC				4.5.2, page 4-14	Mitigation for furbearers		**Response Addendum:** Section 4.5.2 added mitigation information "Should buffer zones not be possible around suitable habitat, mitigation measures would be determined by a QP based on site-specific characteristics including the size of the feature, the species involved, and the intensity level of planned activities. These may include restrictions on specific activities based on noise and visual disturbance levels, or rescheduling of work."	05-Apr-21
190	18-Nov-21	ECCC				4.6, page 4-13	Grizzly bear	Grizzly bear dens are difficult to locate and den surveys increase the risk of bear mortality and human-bear conflict during the sensitive denning period (Gunther et al. 2004; Podruzny et al. 2002). ECCC notes that "if construction can not be avoided during the sensitive periods for bears, that pre-construction surveys will be conducted for grizzly bear denning habitat" and requests information on when these surveys will take place and the level of effort involved.	Methods for pre-clearing surveys for grizzly bear dens are now included in Section 4.6.2, including: *- Habitat suitability mapping for the denning period will be used to identify areas for survey;* *- Historic incidental observations within the study area will be included as representing suitable habitat;* *- If possible, conduct an aerial survey during the fall denning period to look for fresh digs by bears. This should be conducted after bears have denned but before snowfall covers and obscures the diggings;* *- If surveys are conducted during winter, survey the area using a Forward Looking Infrared (FLIR) camera;* *- Alternatively, and if available, survey the area with a dog trained to find grizzly bears;*	30-Dec-21
191	18-Nov-21	ECCC				4.6, page 4-13	Grizzly bear	ECCC notes that currently the plan only addresses denning habitat. ECCC recommends creating a TEM model showing spring/summer habitat (e.g. slide tracks, wetlands) and late summer/fall salmon foraging habitats. A map of these habitats and appropriate mitigation measures targeting these important grizzly bear habitats should be developed as part of the WMMP.	Updates to habitat suitability models are in progress as part of the pre-construction baseline reporting. This information will be included in the updated WMMP in early 2022.	30-Dec-21
191	18-Nov-21	ECCC				4.6, page 4-13	Grizzly bear		**Response Addendum:** Updates to grizzly bear habitat suitability modeling will include additional seasons. However mapping work cannot be completed until new TEM polygons are created, which are reliant on up to date aerial imagery. Aerial imagery was taken in late summer 2021 but smoke from wildfires prevented clear pictures. Therefore, aerial imagery will be retaken in spring 2022, and TEM and habitat suitability maps updated thereafter.	05-Apr-21
192	18-Nov-21	ECCC				4.6.2, page 4-15	Grizzly bear	ECCC notes that "If activities must occur within the buffer zone of a potential den, additional monitoring may be conducted to determine occupancy, in consultation with FLNRORD and Indigenous groups." To facilitate a proper review and ensure risks to grizzly bears are reduced where possible, ECCC recommends including a detailed grizzly bear den survey plan that outlines survey methods, location, timing, and effort level.	Methods for pre-clearing surveys for grizzly bear dens are now included in Section 4.6.2. Detailed methods for surveys outline in the WMMP will be written as Standard Operating Procedures.	30-Dec-21
193	18-Nov-21	ECCC				4.6.2, page 4-16	Grizzly bear	ECCC recognizes that mitigation measures for grizzly bear are shared with other wildlife, however ECCC requests that all measures to mitigate for effects of the project on grizzly bear be clearly outlined (e.g. in table format) including timing and duration of implementation. Currently, table 4.6-1 does not describe standard mitigation measures to avoid and reduce potential conflict with grizzly bears and project activities (e.g. food/waste storage, access restrictions, wildlife feeding/harrassment, speed limits, etc.), nor does it describe any measures to offset for habitat loss specific to grizzly bears (e.g. restoration of denning and foraging habitats lost due to construction and sensory disturbance). ECCC requests this information be included in an updated version of the WMMP.	The Master Mitigation Table (fulfilling EAC commitment 43) lists all mitigation measures according to each wildlife group. Because these mitigations are tabulated in the MTT already, and many measures are repetitive across species groups, the WMMP has condensed mitigation measures according to activity (Section 3) rather than species (Section 4).	30-Dec-21

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193	18-Nov-21	ECCC				4.6.2, page 4-16	Grizzly bear		**Response Addendum:** Updated Section 4.6.2 which now reads "The majority of mitigation measures for grizzly bears are shared with other wildlife species through minimization of Project effects, as described in Section 3. Mitigation for grizzly bear focuses on: - Training and Awareness (Section 2.1 and Appendix C); - Waste management practices to reduce attractiveness to bears, including measures for food preparation and storage, and waste storage and disposal (Section 3.5); - Minimizing the potential for bear-vehicle collisions through speed limits, signage, communication and training (Section 3.6.2); - Reclamation of the site at closure (Section 3.9)."	05-Apr-21
194	18-Nov-21	ECCC				4.6.2, page 4-16	Grizzly bear	ECCC disagrees with the statement that "the DS does not require a follow-up program for grizzly bears". All measures to mitigate effects to wildlife VCs must be monitored in order to determine effectiveness and the need for adaptive management. ECCC recommends that a monitoring program be developed for grizzly bear to determine the effectivenss of mitigation measures, which includes details on monitoring methods and intervention indicators. ECCC requests this information be included in an updated version of the WMMP.	Monitoring for predicted effects and effectiveness of mitigations measures for grizzly bears is included in WMMP Section 4.6.3. The follow-up programs are defined in the federal Decision Statement as monitoring programs with specific requirements (federal condition 2.5). For wildlife, species requiring follow-up programs as part of federal Decision Statement specifications are: caribou (federal condition 8.18.6), little brown myotis and northern myotis (federal condition 8.22), migratory birds (federal condition 4.5), western toad (federal condition 8.21), and whitebark pine/Clark's nutcracker (federal condition 8.20.5). There is no requirement in the federal Decision Statement for such a follow-up program for grizzly bear.	30-Dec-21
195	18-Nov-21	ECCC				4.7, page 4-17	Birds	ECCC notes that not all of the birds found in the region are encompassed by the groups outlined in Section 4.7, woodpeckers and nightjars (caprimulgids) for example are missing. ECCC requests a more inclusive description of all groups of birds likely present in the area and suggests using resources including, but not limited to, BC Bird Atlas, eBird and Breeding Bird Surveys.	Bird groups will be expanded for broader inclusivity in the updated WMMP in early 2022.	30-Dec-21
195	18-Nov-21	ECCC				4.7, page 4-17	Birds		**Response Addendum:** Updated start of Section 4.7 to read "The bird community in and surrounding the Project area consists of upland birds (forest and grassland passerines such as sparrows, finches, jays, and warblers, as well as woodpeckers, nightjars), waterbirds (shorebirds, waterfowl, gulls), and raptors (eagles, hawks, falcons, and owls)."	05-Apr-21
196	18-Nov-21	ECCC				4.7.1, page 4-16, 4-17	Pre-construction surveys	ECCC requests clarification on survey type, duration and frequency for surveys of migratory bird species at risk and their habitat. ECCC recommends that pre-construction bird surveys under Federal Condition 4.3 be conducted in accordance with ECCC's Avoidance Guidelines for reducing harm to migratory birds. Reference: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html	Pre-construction surveys were conducted in 2021; a pre-construction baseline report will be available along with an updated version of the WMMP in early 2022. Additional bird monitoring methods including survey types and schedules is provided in Section 4.7.3.	30-Dec-21
196	18-Nov-21	ECCC				4.7.1, page 4-16, 4-17	Pre-construction surveys		**Response Addendum:** The pre-construction baseline report with detailed results is in progress; a summary of these surveys is now included in the WMMP (Section 4.7.1 for birds).	05-Apr-21
197	18-Nov-21	ECCC				4.7.1, page 4-17	Pre-construction surveys	ECCC requests clarification on what data sources will be used to inform and validate habitat suitability modelling and whether this will include field data from the site. ECCC further recommends that modelling be provided for all bird groups and not only interior forest birds, or that a rationale be provided for the exclusion of the remaining bird groups.	These details will be provided as part of the pre-construction baseline report and updated WMMP in early 2022. Model update and validation for the interior forest birds habitat suitability is required from the EA review regarding using a fisher model as a basis for interior forest habitat (Blackwater Gold Project – Forest Birds [Supplemental Information in Response to 681, 683, 685, 694, 695, 703, 717, 936; and ECCC Annex 1, IR 21, 24, 25]). Habitat suitability model validation is also required for migratory birds, including migratory birds that are listed species at risk, based on the models in the Application/EIS and Blackwater Gold Project – Waterbird Memo (Response to LDN/UFN #684, 693, 697, and NWFN/StFN #964). Habitat suitability for representative species of other bird groups was conducted during the EA, but does not require further updates or validation.	30-Dec-21
197	18-Nov-21	ECCC				4.7.1, page 4-17	Pre-construction surveys		**Response Addendum:** Field data were collected to support updates to habitat suitability mapping. A summary of data collected and pre-construction field results is now provided (Section 4.7.1 for Birds). Updated habitat suitability mapping will be available in 2022. Mapping work cannot be completed until new TEM polygons are created, which are reliant on up to date aerial imagery. Aerial imagery was taken in late summer 2021 but smoke from wildfires prevented clear pictures. Therefore, aerial imagery will be retaken in spring 2022, and TEM and habitat suitability maps updated thereafter.	05-Apr-21
198	18-Nov-21	ECCC				4.7.1, page 4-17	Pre-construction surveys	ECCC is of the opinion that it is unlikely some areas of the transmission line will have a meaningful difference in mortality risk to birds. Therefore, ECCC recommends the entire area around the transmission line be surveyed.	Mitigations for bird mortality along the transmission line were committed to in the Master Mitigation Table (EAC condition 43). This includes identification of portions of the transmission line which pose a heightened risk of bird mortality, with survey methods and schedules included in WMMP Section 4.7.3.6. Survey methods require walking transects on the ground; the current planned route of the transmission line is 135 km. Surveying the entire route would require extensive effort and presents access challenges for surveyors. While planned survey locations do not incorporate the entire transmission line, surveys can be conducted at a greater frequency and intensity (weekly across three months of the year). More frequent surveys throughout the year provide a greater likelihood of identifying potential bird mortality. If bird mortalities are identified, adaptive management measures include expanding surveys to cover additional areas of the transmission line.	30-Dec-21

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199	18-Nov-21	ECCC				4.7.1, page 4-17	Pre-construction surveys	The Inventory Methods for Forest and Grassland Songbirds RIC protocols describe point counts, transects and spot mapping. ECCC requests detailed explanations of pre-construction surveys and recommends that point counts are most appropriate for this project, and should be conducted throughout the year (not just during the breeding season). During the breeding season, point counts may begin 1 h pre-sunrise, and should include time-removal sampling (1 min intervals for a 10 minute point count) and distance sampling (min. bands <50 m, 50-100 m, >100 m). Rare habitats should also be oversampled (i.e., more survey points than the proportion of available habitat); this oversample is necessary to build suitable habitat models that include all habitat types. ECCC also notes that some fo the RIC protocols are out of date. Please refer to guidance on appropriate survey methods for swallows and swifts that was provided by ECCC in June 2021.	Pre-construction surveys were conducted in 2021; a pre-construction baseline report will be available along with an updated version of the WMMP in early 2022. Detailed methods for pre-clearing surveys which are outlined in the WMMP will be written as Standard Operating Procedures, and will include consideration of these methods.	30-Dec-21
199	18-Nov-21	ECCC				4.7.1, page 4-17	Pre-construction surveys		**Response Addendum:** A summary of data collected and pre-construction field results is now provided (Section 4.7.1 for Birds). Detailed methods and results of pre-construction surveys will be available in the pre-construction baseline report. Point counts were conducted in 5 minute durations, with observations binned between 0-3 and 3-5 minutes, as well as recorded by distance (<50m, 50-100m, >100m). Surveys were conducted in June 2021 prior to receipt of these comments, so oversampling was not incorporated into the study design. Swallow and swift survey reference guidelines have now been updated in text (Section 4.7.3.4) along with surveys conducted (Section 4.7.1)	05-Apr-21
200	18-Nov-21	ECCC				4.7.1, page 4-17	Methods for Swallows and Swifts	ECCC recommends surveys for Black Swift follow more updated guidance: "Black Swift - baseline survey protocol and effects assessment for Environmental Assessment" as recommended in ECCC comments provided in June 2021. ECCC has provided a copy of this guidance.	This information will be included in the updated WMMP in early 2022	30-Dec-21
200	18-Nov-21	ECCC				4.7.1, page 4-17	Methods for Swallows and Swifts		**Response Addendum:** The black swift survey reference guidelines have now been updated (Section 4.7.3.4) in text along with surveys conducted (Section 4.7.1). Note that in June 2021, ECCC recommended using Rock et al 2021. Both Rock et al 2021 and the baseline survey protocol shared in November 2021 have been included in the WMMP.	05-Apr-21
201	18-Nov-21	ECCC				4.7.1, Table 4.7-1, Page 4-18	Bank Swallow Resources	ECCC requests that the proposed recovery strategy be incorporated where applicable for Bank Swallows. Reference: https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/bank-swallow-proposed-2021.html	This information will be included in the updated WMMP in early 2022	30-Dec-21
201	18-Nov-21	ECCC				4.7.1, Table 4.7-1, page 4-18	Bank Swallow Resources		**Response Addendum:** The bank swallow Recovery Strategy is now included in Table 4.7-1.	05-Apr-21
202	18-Nov-21	ECCC				4.7.2, Page 4-19	Vegetation Clearing	ECCC recommends the following edit to the text on page 4-19 "Following the mitigation hierarchy, vegetation clearing will be planned to occur outside of the ~~during~~ bird breeding periods (MT 9-3; Table 3.2-1)." [...] "Environmental Assessment Certificate Condition 23.C, Table 1, indicates that if vegetation clearing must occur during the sensitive period ~~in a sensitive location~~, then pre-clearing surveys will be conducted to identify active nests and establish appropriate setback buffers."	This information will be included in the updated WMMP in early 2022	30-Dec-21
202	18-Nov-21	ECCC				4.7.2, Page 4-19	Vegetation Clearing		**Response Addendum:** Typo removed. Section 4.7.2.1 also updated to read "EAC Condition 23c, Table 1, indicates that if vegetation clearing must occur during the sensitive period, then pre-clearing surveys will be conducted to identify active nests and establish appropriate setback buffers."	05-Apr-21
203	18-Nov-21	ECCC				4.7.2, Page 4-19	Vegetation Clearing	ECCC does not support pre-construction surveys. ECCC recommends that ECCC's Avoidance Guidlines for migratory birds are followed.	Pre-clearing surveys for sensitive wildlife features, including bird nests, are a standard component of wildlife management plans. Pre-clearing surveys are necessary to provide alternatives to avoiding work during sensitive periods, which span the entire calendar year when accounting for different wildlife species. ECCC's Avoidance Guidelines have been taken into account and methods for pre-clearing surveys were developed with the appropriate measures to minimize harm to migratory birds (Section 4.7). BW Gold is open to discussion on appropriate mitigation and managment measures for migratory birds.	30-Dec-21
204	18-Nov-21	ECCC				4.7.2, Page 4-19	Mitigation Measures for Birds	"Planning, pre-clearing surveys and setbacks during vegetation clearing." ECCC notes that 'pre-clearing surveys' are not in compliance with Federal Condition 4.1 as they do not follow ECCC's current Avoidance Guideline for migratory birds.	Pre-clearing surveys for sensitive wildlife features, including bird nests, are a standard component of wildlife management plans. Pre-clearing surveys are necessary to provide alternatives to avoiding work during sensitive periods, which span the entire calendar year when accounting for different wildlife species. ECCC's Avoidance Guidelines have been taken into account and methods for pre-clearing surveys were developed with the appropriate measures to minimize harm to migratory birds (Section 4.7). BW Gold is open to discussion on appropriate mitigation and managment measures for migratory birds.	30-Dec-21
205	18-Nov-21	ECCC				4.7.2, Page 4-19	Mitigation Measures for Birds	ECCC recommends a larger bird breeding window, following ECCC's nesting calendars appropriate for the region: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html	The bird breeding window will be updated based on the breeding calendars provided, and will be incorporated in the updated WMMP in early 2022.	30-Dec-21

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205	18-Nov-21	ECCC				4.7.2, Page 4-19	Mitigation Measures for Birds		**Response Addendum:** Birds Canada was utilized to determine nesting periods for each species group, and any outlier species (e.g., Clark's Nutcracker). Section 4.7.2 now includes these definitions of the sensitive nesting periods: "Planning and avoiding vegetation clearing during the breeding season for birds; - The sensitive nesting period for forest and grassland birds and waterbirds begins April 15 (Birds Canada 2021, ECCC 2017; Table 3.3-1). - Clark's Nutcracker is an exception, with nesting dates from March 15 – July 30. - The sensitive nesting period for raptors begins March 15 and continues through August 15."	05-Apr-21
206	18-Nov-21	ECCC				4.7.2, Page 4-19	Mitigation Measures for Birds	"Planning for avoidance will occur in areas identified through habitat suitability mapping as a sensitive location for breeding birds". ECCC notes that migratory birds can nest in all habitat types, whether they are deemed 'sensitive locations' or not. ECCC recommends mitigating for nesting birds in all habitats, including construction sites, as some species will nest in more disturbed areas. ECCC further requests information on how auditory effects on birds will be mitigated.	The current WMMP version complies with this request. Methods (Section 4.7.2.1) now state: *Surveys will be conducted in areas planned for clearing or construction, buffered by 100 m.* Mitigation for auditory effects on birds is included in WMMP Section 3.1: *Noise abatement [will be] implemented to manage noise adjacent to the mine site and airstrip, through assessment of machinery, use of insulation or barriers, and engineering considerations (MT 7-3, 10 7, 11-7, 13-4, 14-4). Specific mitigation options will be chosen by engineers during construction of the airstrip and mine site facilities.*	30-Dec-21
206	18-Nov-21	ECCC				4.7.2, Page 4-19	Mitigation Measures for Birds		**Response Addendum:** Mitigation for auditory effects is now exclusively referenced in the Noise and Vibration Effects Mitigation and Monitoring Plan (NVEMMP), measures listed above are accurate but are no longer included in the WMMP.	05-Apr-21
207	18-Nov-21	ECCC				4.7.2, Page 4-20	Residual Effects	ECCC notes that mortality due to collision with the transmission line is a residual effect of the Project for forest and grassland birds as well as water birds.	This effect is noted and monitoring for the predicted effect is covered in Section 4.7.3.6. Text within the monitoring sections of the WMMP has changed significantly, and the original text referred to in this comment has been moved or changed.	30-Dec-21
208	18-Nov-21	ECCC				4.7.3, Page 4-20	Follow-up program	ECCC recommends monitoring be conducted for all migratory birds, not just species at risk.	Section 4.7.3 includes monitoring for the migratory bird community, in addition to listed species as risk, as required in federal Condition 4.5	30-Dec-21
209	18-Nov-21	ECCC				4.7.3, Page 4-20	Follow-up program	"The EA predicted three residual effects for water birds (ducks, waterfowl, swans, geese)". ECCC notes that only waterfowl (ducks, geese and swans) are included as waterbirds, when there are other groups of species (e.g. Gulls) that may also experience residual effects and need to be accounted for in this program.	The definition of waterbirds at the beginning of Section 4.7 now includes "*waterbirds (shorebirds, waterfowl, gulls)*". Section 4.7.3.5 includes the specific waterbird component of the follow-up program.	30-Dec-21
210	18-Nov-21	ECCC				4.7.3, page 4-21	Follow-up program	"Finally, to ensure the success of setback buffers during clearing, BW Gold will monitor for success of nests where setback buffers have been installed during construction and vegetation clearing of the Project". ECCC continues to recommend vegetation clearing is done outside of the breeding season. If a nest is found during the breeding period and protected with a buffer zone, the nest should be protected until the young have permanently left the vicinity of the nest.	Nest success surveys (Section 4.7.3.10) are included as part of monitoring to confirm effectiveness of mitigation measures (i.e., effectiveness of setback buffers). Buffered nests are protected until young have permanently left the vicinity of the nest. Detailed methods for pre-clearing surveys and establishment and monitoring of nest setback buffers will be provided as Standard Operating Procedures.	30-Dec-21
211	18-Nov-21					4.7.3, page 4-21	Habitat Loss	"Habitat for birds will be lost within the Project footprint during construction and operations and will be recovered during closure and reclamation. The amount of habitat lost will be evaluated each year by comparing the as-built Project footprint with available habitat suitability mapping. The total area and area of high and moderate quality habitat lost for birds will be reported in the WMMP Report. " ECCC requests information on how habitat loss will be compensated for during the project operation phase and how the time lag for restoration will be taken into consideration.	Habitat loss within the levels predicted in the EIS/Application were not determined to require compensation during the life of the mine (based on EAC and federal Decision Statement commitments). Habitat reclamation and restoration is planned to occur progressively when areas are no longer in use, as described in WMMP Section 3.10.	30-Dec-21
211	18-Nov-21					4.7.3, page 4-21	Habitat Loss		**Response Addendum:** This is now Section 3.9 not 3.10	05-Apr-21
212	18-Nov-21	ECCC				4.7.3, page 4-22	Habitat Alteration	ECCC recommends using "Black Swift - baseline survey protocol and effects assessment for Environmental Assessment" protocols for Black Swifts (PDF attached).	This information will be included in the updated WMMP in early 2022	30-Dec-21
212	18-Nov-21	ECCC				4.7.3, page 4-22	Habitat Alteration		**Response Addendum:** Monitoring Section 4.7.3.4 for Swallows and Swifts now includes the specific Black Swift references: "Currently, no suitable habitat for black swift has been identified. However if black swift surveys occur in future, they will be conducted following Black Swift Survey Protocols in Canada: Site Occupancy, Nest Searching, and Site Habitat (Rock et al. 2021), and Black Swift - Baseline Survey Protocol and Effects Assessment for Environmental Assessment (ECCC 2021)"	05-Apr-21

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213	18-Nov-21	ECCC				4.7.3, page 4-24	Success of Setback buffers	ECCC notes that weekly monitoring of active nests will likely lead to greater disturbance of migratory birds. ECCC recommends if nests are found during the breeding season a buffer is put in place based on a) alert distance and b) flush distance and left alone till outside of the nesting season, in line with ECCC's Avoidance Guidelines.	As noted in comment line 56 above, nest success surveys (Section 4.7.3.10) are included as part of monitoring to confirm effectiveness of mitigation measures (i.e., effectiveness of setback buffers). This monitoring provides data to assess the need for adaptive management and informs whether mitigation measures need to be adjusted. Buffered nests are protected until young have permanently left the vicinity of the nest, as recommended in comment line 56. Detailed methods for pre-clearing surveys and establishment and monitoring of nest setback buffers will be provided as Standard Operating Procedures.	30-Dec-21
214	18-Nov-21	ECCC				4.7.3, page 4-24	Clark's Nutcracker	ECCC recommends that playbacks occur at each point count site.	BW Gold will review the current monitoring plan for Clark's nutcracker and consider adjusting to 50 VRPCs with playbacks at all sites. Updated comment response will be provided with the updated WMMP in early 2022	30-Dec-21
214	18-Nov-21	ECCC				4.7.3, page 4-24	Clark's Nutcracker		**Response Addendum:** Section 4.7.3.7 now includes playbacks at all 50 VRPC sites.	05-Apr-21
215	18-Nov-21	ECCC				4.7.4, page 4-24	Adaptive management	ECCC recommends the following edit: "Review dust deposition and ~~fugitive~~ light **emissions** that may create edge effects for birds."	This terminology will be included in the updated WMMP in early 2022.	30-Dec-21
215	18-Nov-21	ECCC				4.7.4, page 4-24	Adaptive management		**Response Addendum:** WMMP no longer uses the term "fugitive light" except in title reference to AQDMP	05-Apr-21
216	18-Nov-21	ECCC				4.7.4, Table 4.7-2, page 4-25	Adaptive management	Table 4.7-2 outlines triggers for various levels of adaptive management for birds. ECCC requests an additional column that defines what metrics or measurement indicators will be used to determine each indicator (e.g. "trend", "fewer birds", "bird mortality"). For example how many fewer Clark's nutcracker would trigger a low level response and what would be considered a trend? ECCC also requests details on what some measurement indicators will be compared to (e.g. "fewer birds near the mine site", "bird mortality recorded on the transmission line").	Triggers and Thresholds have been re-worked for all species groups, including throughout Section 4.7.	30-Dec-21
217	18-Nov-21	ECCC				4.7.4, Table 4.7-2, page 4-25	Adaptive management	ECCC notes that the setback distance of 100 m for effects on birds is likely not appropriate as the effects of noise and habitat edges can be far-reaching and vary based on species and habitat. ECCC recommends that setback distances should be determined using the alert and flush distance of birds in the area, as per ECCC's current Avoidance Guidance.	Text within the monitoring sections of the WMMP has changed significantly, and the original text referred to in this comment has been moved or changed. The monitoring area for potential avoidance effects of forest and grassland birds and waterbirds currently includes a 200 m around the Project footprint (Sections 4.7.3.2 to 4.7.3.5)	30-Dec-21
218	18-Nov-21	ECCC				4.8, page 4-26	Plant Species and Ecosystems at Risk	ECCC requests the opportunity to review and provide comment on the VMP and WPMP to ensure appropriate mitigation measures and monitoring methods are taken for vegetation and plant species at risk, including whitebark pine.	BW Gold will provide the current drafts of the Vegetation Management Plan and Whitebark Pine Management Plan to ECCC for review.	30-Dec-21
219	18-Nov-21	ECCC				5.2, page 5-2	Reporting	ECCC recommends including grizzly bear and caribou to the list of wildlife VCs with follow-up programs.	Monitoring for predicted effects and effectiveness of mitigations measures for grizzly bears is included in WMMP Section 4.6.3. Caribou have a follow-up monitoring program (as defined in federal condition 8.18.6) which is included in the Caribou Mitigation and Monitoring Plan. The follow-up programs are defined in the federal Decision Statement as monitoring programs with specific requirements (federal condition 2.5). For wildlife, species requiring follow-up programs as part of federal Decision Statement specifications are: caribou (federal condition 8.18.6), little brown myotis and northern myotis (federal condition 8.22), migratory birds (federal condition 4.5), western toad (federal condition 8.21), and whitebark pine/Clark's nutcracker (federal condition 8.20.5). There is no requirement in the federal Decision Statement for such a follow-up program for grizzly bear.	30-Dec-21
220	18-Nov-21	ECCC				9, page 9-2	References	ECCC notes the ECCC 2017 Avoidance Guidelines used in the WMMP are out of date and should be updated and addressed in this section and any other area of the WMMP where it is referenced. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html	The citation for Avoidance Guidelines will be updated to include the current "Date modified" as the year provided on the webpage (i.e., 2021). Citation will be included in the updated WMMP in early 2022: ECCC. 2021. Guidelines to Reduce Risk to Migratory Birds. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html (accessed December 2021).	30-Dec-21
220	18-Nov-21	ECCC				9, page 9-2	References		**Response Addendum:** The citation for Avoidance Guidelines in the WMMP is now: ECCC. 2021a. Avoidance Guidelines. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html (accessed December 2021).	05-Apr-21
221	21-Oct-21	FLNRO		Duncan McColl	WMMP		General	"BW Gold is providing this draft version of the WMMP for review and comment. BW Gold welcomes comments on the draft Plan" - Condition 4 EAC the WMMP is developed in consultation with... providing a draft for comments is not "development in consultation with".	Comment acknowledged.	30-Dec-21
222	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"The baseline information that will be used, or collected where existing baseline information is insufficient, to support the monitoring program" -Managment framework references statistical significance for adaptive managment actions. Prior to establishing monitoring programs power analyses will be needed to identify the sampling intensity needed to ensure statistical relevance can be achieved. Baseline data that has been collected needs to be clearly identified. There needs to be clear connections between the data collected as basline, the data collected for monitoring, the monitoring question, the monitoring goal, and the analysis.	During the development of the August 2021 WMMP, the objective was to have a common trigger for adaptive management using statistical significance as a threshold. This was true for both the CMMP and WMMP. Following comments from parties on this approach to setting triggers/thresholds, the November 2021 WMMP included in the MAEMA was updated to include species and study-specific triggers that are unrelated to statistical significance.	30-Dec-21

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223	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Specific consultation will also be conducted with the Stellat'en First Nation and FLNRORD to address any potential access management issues in the Stellako Wildlife Management Area (WMA), including possible monitoring of Project-related effects and offsetting effects if needed (MT 6-30, 9-35)." This has not been complete and the lay out for the transmission line in the WMA has occured.	The consultation related to the WMA is still occurring. It will be updated in the next version of the WMMP in January 2022.	30-Dec-21
223	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat		**Response Addendum:** Updated text in Section 1.4 to read: "Specific consultation is ongoing with the Stellat'en First Nation and FLNRORD to address any potential access management issues in the Stellako Wildlife Management Area (WMA), including possible monitoring of Project-related effects and offsetting effects if needed (MT 6-30, 9-35). Consultation to date includes: - As required by EAC condition 39 BW Gold developed a Phase 1 final transmission line (TL) routing plan in consultation with the Stellat'en (StFN) First Nation and FLNRORD. The draft plan was submitted to EAO on February 17, 2021 and BW Gold began implementation of the plan shortly thereafter. - On March 1, 2021, BW Gold sent a letter to StFN requesting feedback on the TL routing options, including at the Stellako River crossing. The letter included a listing of proposed mitigation measures for the TL. BW Gold did not receive any specific feedback on the letter from StFN, although it was communicated earlier to BW Gold that the preferred routing is the Stellako re-route (which was ultimately selected by BW Gold). - BW Gold has completed Phase 1 of the final transmission line routing plan and has initiated work on the Phase 2 plan. The Phase 2 plan will be developed in consultation with FLNRORD and Aboriginal groups including StFN. BW Gold intends on engaging with the required parties as part of development of the Phase 2 plan."	05-Apr-21
224	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Adaptive Management Trigger Framework - Prior to establishing monitoring programs power analyses will be needed to identify the sampling intensity needed to ensure statistical relevance can be achieved. Baseline data that has been collected needs to be clearly identified. There needs to be clear connections between the data collected as basline, the data collected for monitoring, the monitoring question, the monitoring goal, and the analysis.	During the development of the August 2021 WMMP, the objective was to have a common trigger for adaptive management using statistical significance as a threshold. This was true for both the CMMP and WMMP. Following comments from parties on this approach to setting triggers/thresholds, the November 2021 WMMP included in the MAEMA was updated to include species and study-specific triggers that are unrelated to statistical significance.	30-Dec-21
225	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Standard engineering mitigations will be used to manage Project effects on the hydrological regimes of wetlands near infrastructure (MT 12-11, 12-15, 13-8)" Are these noted in another plan? if not some details should be provided.	This information is provided in the Wetlands Management and Offsetting Plan.	30-Dec-21
225	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Standard engineering mitigations will be used to manage Project effects on the hydrological regimes of wetlands near infrastructure (MT 12-11, 12-15, 13-8)" Are these noted in another plan? if not some details should be provided.	**Response Addendum:** Section 3.1 now reads: "Black spruce forest and sedge meadow habitat is maintained, particularly around wetlands, to benefit dragonfly and butterfly populations. Standard engineering mitigations will be used to manage Project effects on the hydrological regimes of wetlands near infrastructure, as described in the Wetlands Management and Offsetting Plan (WMOP; MT 12-11, 12-15, 13-8);"	05-Apr-21
226	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Recreation trails are not located in sensitive habitat, including grizzly bear or caribou habitat (MT 8-19, 9-17, 11-26, 13-18, 14-16)" Is BW building recreational trails?	BW Gold is not planning to build any recreational trails at this time.	30-Dec-21
226	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat		**Response Addendum:** Section 3.1 now reads "If any recreation trails are made, they will not be located in sensitive habitat, including grizzly bear or caribou habitat (MT 8 19, 9-17, 11-26, 13-18, 14-16). No recreation trails are currently planned;"	05-Apr-21
227	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Infrastructure design mitigations for sensory disturbance to wildlife include:" Was the use of auditory deterrents for birds considered in these designs?	Infrastructure design considered measures to mitigate sensory impacts on wildlife. Measures to mitigate sensory impacts include noise abatement technology, equipment placement and regular equipment maintenance and of insulation or barriers. Auditory deterrents for birds were not considered in the design. As noted in 3.5.1, there are physical, visual and sound deterrents and the choice of which one to use depends on the wildlife species that could be impacted by the use of one method. Different deterrence methods will be employed and monitored by remote cameras and the incidental monitoring program. Monitoring results will inform adaptive management. The information can be found in the WMMP in Section 4.7.3 (Table 4.7-2) and Section 4.10 (4.10-1).	30-Dec-21
228	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Any areas with suspected or known occurrence of chytrid must follow decontamination protocols..." This implies that wetlands and amphibians were surveyed specifically for Chytrid, was this the case?	Wetlands and amphibians were not surveyed for Chytrid historically at the site. Chytrid sampling is planned as part of future amphibian sampling in 2022.	30-Dec-21
229	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1: Pre-construction surveys to determine the distribution of little brown myotis and northern myotis" Has this been done?	Pre-construction bat surveys were conducted during the summer of 2021 and described in Section 4.2.1. This included surveys using Autonomous Recording Units and surveys for snag/wildlife trees that may support summer roosts. The results of 2021 bat surveys results will be summarized into a 2021 baseline report and incorporated into the next version of the WMMP in January 2022.	30-Dec-21
229	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1: Pre-construction surveys to determine the distribution of little brown myotis and northern myotis" Has this been done?	**Response Addendum:** The summary of 2021 pre-construction survey results have been incorporated into the WMMP, however the detailed report is not yet ready.	05-Apr-21
230	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1: "Establish buffer zones around active hibernacula and active roosts" It is not clear that the full potential of hibernacula were considered as only caves in karst are considered in section 4.2.	Buildings were also considered as hibernacula and were surveyed during summer 2021.	30-Dec-21

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230	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1: "Establish buffer zones around active hibernacula and active roosts" It is not clear that the full potential of hibernacula were considered as only caves in karst are considered in section 4.2.	**Response Addendum:** Text added to the beginning of Sections 4.2: "In northern areas, such as the Project location, hibernacula typically occur in caves located in karst (limestone) formations which are deep enough to maintain a constant temperature above freezing. No limestone formations are located in the Project site. Some bat species hibernate in habitat such as rootwads, crevices, and tree bark, however these features are not likely to be suitable for hibernation in the Project area due to lack of insulation from extremely cold winter temperatures."	05-Apr-21
231	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1 "If surveys identify loss of little brown myotis and northern myotis roosting habitat, implement offsetting through roosting structures maintained throughout the life of the mine" Maintained until restored life of mine is insufficienct to address impacts.	Pursuant to federal Decision Statement Condition 8.15, should any roosting structures be installed, they will be maintained during construction, operation and decommissioning.	30-Dec-21
231	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat		**Response Addendum:** Section 4.2 includes updates regarding roosting structures for bats, as consultation with ECCC has indicated that roosting structures are no longer recommended.	05-Apr-21
232	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1 "Conduct pre-construction surveys for caribou habitat and mineral licks" Has this been done? Where is the data and survey information?	Pre-construction surveys for mineral licks are discussed in Section 4.4.1. Surveys of mineral licks were conducted during summer of 2021 and included walking surveys in the mine site and transmission line right-of-way during other surveys (habitat suitability mapping, birds, and amphibians) with incidental reporting of salt licks whenever they were observed. The 2021 wildlife surveys results will be reported in a 2021 wildlife baseline report and incorporated into the next version of the WMMP in January 2022.	30-Dec-21
232	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat		**Response Addendum:** The summary of 2021 pre-construction survey results have been incorporated into the WMMP, however the detailed report is not yet ready. No mineral licks were identified during pre-construction surveys.	05-Apr-21
233	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1 "If caribou are observed on site during construction or operations, work will be stopped or managed to reduce disturbance to caribou" - from the CMMP "Observations of caribou on the mine site during construction may result in a work stoppage until the caribou moves off. Management response will be based on an assessment of the risk of disturbance to caribou based on the Project activity, distance and behaviour of caribou and duration of activity. No active deterrence of caribou is permitted unless caribou are in a location that is dangerous. " the management responses should be the sam in both documents. distance away from work area needs to be defined	The Caribou Mitigation and Monitoring Plan is in the process of being updated for submission in late December 2021. The next version of the WMMP will be updated to match the CMMP in January 2022.	30-Dec-21
233	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat		**Response Addendum:** Relevant text in Table 3.3-1 now reads "-Observations of caribou on the mine site during construction may result in a work stoppage until the caribou moves off. See CMMP for management details. - No active deterrence of caribou is permitted unless caribou are in a location that is dangerous. "	05-Apr-21
234	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	Table 3.2-1 "If clearing required during denning period, conduct pre-construction surveys for denning habitat of:" Has potential fisher dennin habitat beed identified?	The EAC Application used marten as a representative terrestrial furbearer. 12 marten were observed during baseline studies compared to 1 fisher. Habitat suitability mapping identified living winter habitat that can support denning on the mine site and transmission line (EAC Application Vol 4, Sec 5.4.1.3, Figure 5.4.13-3). The winter model for marten was based on structural stage, with stages 6 and 7 (mature and old forests) providing optimal security and were rated 1-2 (high, medium high) in the model. Mature structural stages area also preferred by fisher for denning, and so potential denning habitat can be considered to be detected on the mine site.	30-Dec-21
235	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Details of management actions, including buffer zones, will be outlined on a site-specific basis following a risk-based assessment of the species in question, the habitat, and the type of Project activity and its potential to disturb wildlife" will this be done by a QP?	Yes this will be done by a QP.	30-Dec-21
235	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat		**Response Addendum:** Relevant text in Section 3.3 now reads "Mitigation measures, including buffer zones, will be outlined by a QP on a site-specific basis following a risk-based assessment of the species in question, the habitat, and the type of Project activity and its potential to disturb wildlife. Management decisions will be made in consultation with Indigenous groups (DS 4.5, 8.10) and relevant authorities (P 23c, 23h, DS 4.1, 8.9, 8.10, 8.11, MT 10-22)."	05-Apr-21
236	21-Oct-21	FLNRO		Duncan McColl	WMMP		Wildlife & Habitat	"Retaining and enhancing forest edge habitat along road areas to provide escape or thermal cover for birds (MT 9-5);" - How will forest edge be enhanced? And how is enhancing edge mitigating edge effects?	The specifics of road-side vegetation management are being developed and will be included in the next version of the WMMP. This is a complicated topic where driver safety calls for low vegetation and wildlife movement calls for taller vegetation. Finding the correct balance to keep both wildlife and personnel safe is important and taking time. General mitigation measures on vegetation management can be found in the vegetation management plan in Section 8, Table 8.1-1 General Mitigation Measures.	30-Dec-21