BW GOLD LTD
a subsidiary company of Artemis Gold Inc

Blackwater Gold Project

Accidents and Malfunctions Administration and Communication Plan

April 2022

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ACRONYMS AND ABBREVIATIONS

Aboriginal Groups or Indigenous nations	Lhoosk'uz Dené Nation, Ulkatcho First Nation, Nadleh Whut'en First Nation, Saik'uz First Nation, Stellat'en First Nation and Nazko First Nation (as defined in the Project's Environmental Assessment Certificate #M19-01)
ACMP	Accidents and Malfunctions Administration and Communication Plan
Application/EIS	Application for an Environmental Assessment Certificate / Environmental Impact Statement
Artemis	Artemis Gold Inc.
BC	British Columbia
BW Gold	BW Gold LTD.
C&E	Compliance and enforcement
CEO	Chief Executive Officer
CM	Construction Manager
Code	Health, Safety, and Reclamation Code for Mines in British Columbia
COO	Chief Operating Officer
ECD	Environmental Control Dam
DS	Decision Statement
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EM	Environmental Manager
EMC	Environmental Monitoring Committee
EMLI	Ministry of Energy, Mines and Low Carbon Innovation
EMP	Environmental management plan
EMS	Environmental Management System
ENV	Ministry of Environment and Climate Change Strategy
EPCM	Engineering, Procurement and Construction Management
ERAP	Emergency Response Assistance Plans
FLNRORD	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
GM	General Manager
IAAC	Impact Assessment Agency of Canada

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 Decision Statement)
km	Kilometre
MERP	Mine Emergency Response Plan
MoE	Ministry of Environment
MRT	Mine Rescue Team
MSDP	Mine Site Water and Discharge Monitoring and Management Plan
New Gold	New Gold Inc.
PPA	Potential Problem Analysis
TDG	Transportation of Dangerous Goods Regulation
VP	Vice President

1. PROJECT OVERVIEW

The Blackwater Gold Project (the Project) is a gold and silver open pit mine located in central British Columbia (BC), approximately 112 kilometres (km) southwest of Vanderhoof, 160 km southwest of Prince George, and 446 km northeast of Vancouver.

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) will be built to replace the existing exploration access road, which will be decommissioned. The new planned access is at km 124.5. Driving time from Vanderhoof to the mine site is about 2.5 hours.

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. 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 (LDN), Ulkatcho First Nation (UFN), 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 (NWFN), Saik'uz First Nation (SFN), and Stellat'en First Nation (StFN; collectively, the Carrier Sekani First Nations [CSFNs]) as well as the traditional territories of the Nazko First Nation (NFN), Nee-Tahi-Buhn Band, Cheslatta Carrier Nation and Yekooche First Nation (BC EAO 2019a, 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 24 to approximately 45 years, ending when the Open Pit has filled and the TSF is allowed to passively discharge to Davidson Creek, and the Post-Closure phase is +46 years.

New Gold Inc. (New Gold) received Environmental Assessment Certificate #M19-01 (EAC) on June 21, 2019 under the 2002 *Environmental Assessment Act* (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.

2. PURPOSE AND OBJECTIVES

The purpose of the Accidents and Malfunctions Administration and Communication Plan (ACMP) is to identify the means by which BW Gold will notify Indigenous groups, Tatelkus Lake Indian Reserve 28, nearby residents and businesses, local communities or other user groups should an accident or malfunction occur in relation to the Project. The ACMP objectives are to:

- Identify the types of accidents and malfunctions requiring notification, timelines for providing notice, information to be included in a notice and how a notice will be provided;
- 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; and
- Identify the approach to manage risk and monitor and report on Project-vehicle accidents.

The ACMP, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction, Operations, Closure and Post-Closure, and to the satisfaction of the EAO.

2.1 Exclusions

On-site medical emergencies and events specific to the health, safety, or wellbeing of on-site staff, while important, are unlikely to cause an environmental effect and therefore are not considered in the ACMP. This type of emergency is addressed in the Mine Emergency Response Plan (MERP; Appendix 9-11; BW Gold 2021).

The ACMP does not address sections 1.7.1 to 1.7.3 (Accidents or Dangerous Occurrences) of the Health, Safety, and Reclamation Code for Mines in British Columbia (Code; EMLI 2021).

2.2 Background

Potential Problem Analysis (PPA) for accidents and malfunctions was completed for the Project's Application for an Environmental Assessment Certificate / Environmental Impact Statement (Application/EIS; New Gold 2015). The PPA included identification of potential accidents and malfunctions and associated risk evaluation based on similar mining projects, internal risk assessment discussions, workshops, and comments received from Aboriginal Groups, stakeholders and the public during the environmental assessment process.

For credible accident and malfunctions, the effects were assessed based on a reasonable worst-case scenario. Occurrences were not assessed in the case where environmental effects are unlikely to occur due to the implementation of multiple/redundant levels of controls (e.g., where there are multiple backup systems).

Tables 2.2-1 and 2.2-2 provide the definitions for likelihoods from the PPA.

Table 2.2-1: Definitions for Likelihood of Occurrence

Description		Frequency
Almost Certain	Happens often	More than one event per month
Likely	Could easily happen	More than one event per year
Possible	Could happen and has happened here or elsewhere	One event per 1-10 years
Unlikely	Has not happened yet but could	One event per 10-100 years
Very Rare	Conceivable but only in extreme circumstances	Less than one event per 100 years

Source: Table adapted from New Gold 2015.

Table 2.2-2: Definitions for Consequence of Occurrence

Consequence Descriptor	Reputation	Business	Environment	Damage/ Loss	People
Catastrophic	Major damage to reputation receiving national or international negative media OR production to cease as a result of statutory body concerns	>48 h production delay	Irreparable damage, very serious long-term impairment of ecosystem	>$500k	Fatality(ies)
Major	Major damage to reputation receiving province wide negative media OR non-compliance with statutory requirements	>24 h <48 h production delay	Serious medium-term environmental impact affecting whole ecosystem	>$100k <$500k	Permanent and total disability
Moderate	Moderate damage to reputation localized to the regional media OR non-compliance with statutory requirements resulting in minor fine	>12 h <24 h production delay	Moderate short-term effects affecting part but not affecting whole of ecosystem	>$50k <$100k	Lost time injury
Minor	Minor effect on reputation localized to community near mine OR technical divergence that may attract attention from statutory authorities	>6 h <12 h production delay	Little short-term effect on biological or physical environment	>$5k <$50k	Disabling injury
Insignificant	No effect on stakeholders or reputation	<6 h production delay	Limited damage to minimal area of low significance or previously disturbed area	<$5K	First Aid/Medical Treatment injury with no time lost or change of duties

Source: Table adapted from New Gold 2015.

Table 2.2-3 identifies the accidents and malfunctions and PPA risk score results that were assessed in the Application/EIS (New Gold 2015). Table 2.2-3 reiterates mitigation and response actions to address potential adverse effects resulting from an accident or malfunction, including those that are not addressed in plans, programs or other documents required by the EAC or provincial requirements for the Project.

The “Response” column represents a typical set of responses for the category of accident or malfunction listed. It is important to note that the complete and detailed responses will need to be developed, approved, and periodically updated by the Mine Manager and mine management team, Aboriginal groups, agencies and other potentially affected interests. The “Response” column content can be used at the stage of this document development to illustrate elements within the scope of response, and are not to be relied upon as definitive response procedures.

Table 2.2-3: Accidents and Malfunctions Summary of Risk, Mitigation and Response Measures

Accident or Malfunction	Issue of Concern	Likelihood	Consequence	Risk Score	Mitigation Measures	Response
TSF dam failure or breach	Damage to terrestrial and aquatic habitat; wildlife kill; human fatality	Very Rare	**Catastrophic (Level 5)**	High	Potential environmental effects of a dam failure are mitigated through design, construction, monitoring and maintenance. An Operations, Maintenance, and Surveillance manual will be developed for the TSF. Relevant sections in Part 10 of the Code include: section 3.7.1 (requires a mine emergency response plan; Appendix 9-J of the Application); 10.1.11 (requires a breach and inundation study or a failure runout assessment; Appendix 3-Q of the Application); section 10.1.4 (identifies design standards for impoundments, tailings storage facility and water management facilities and dam; Appendix 3-K of the Application); section 10.5.3 (requires annual dam safety inspection; once constructed); section 10.5.4 (requires dam safety reviews at least every 5 years; once constructed), and section 10.4.2 (oversight by an Independent Tailings Review Board; once constructed). Geotechnical instrumentation will be installed to monitor TSF dams. An Emergency Response Plan (ERP) will be developed in accordance with the *Metal and Diamond Mining Effluent Regulations.* By following the ERP, the environmental disturbance and hazard to people, aquatic systems and wildlife will be minimized.	The initial response to any failure at the TSF will be to protect worker human health and safety and shutdown pumping of tailings to the TSF. The spill will be contained to the extent possible using temporary earthen or snow dams, silt fences, sandbags, and other available equipment. Appropriate spill control equipment will be maintained at the Project site. Tailings cleaned up from a spill will likely need to be placed in the open pit unless solid enough to place on one of the on-land waste dumps. The Proponent will work closely with local residents and authorities to ensure the needs of downstream residents are met should any such event occur. Due to the implementation of the EMS and the numerous operational controls to be put in place, the likelihood of a failure of the TSF is very rare. A remedial action plan will be developed in consultation with appropriate government agencies in the event of TSF dam failure. Spilled tailings and waste rock will need to be effectively contained because of the acid rock drainage characteristics. This means that the Proponent will need to excavate spilled tailings and haul them back to the repaired TSF. Alternatively, a cover could be engineered over the deposited material, if feasible. All areas where tailings are removed will be restored and revegetated to the extent practical. A surface water and groundwater monitoring program will be created to monitor the movement of aqueous parameters and the success of rehabilitation measures.
Spills of hazardous substances outside of engineered containment	Damage to aquatic life and downstream human environment	Possible	**Major (Level 4)**	High	Measures identified in the Chemicals and Materials Storage, Transfer, and Handling Plan (Appendix 9-M in BW Gold 2021).	The first goal will be to ensure public and worker health and safety. Residents nearby a spill will be notified by the Mine Manager or designate and apprised of the nature and extent of the spill. Potential ignition sources will be removed in the event of a spill of flammable or combustible materials if safely possible, and the spill will be stopped. Appropriate corporate and external personnel will be notified, and an assessment will be conducted to determine the best means to prevent immediate environmental impacts. Spill countermeasures will include the use of absorbent materials, establishment of a collection trench downslope, and setting collection booms on water if effective for the spilled material. Work closely with local authorities, including the Emergency Management BC to manage, clean up, and remediate the impacted area. Following a reportable spill as defined under the BC Spill Reporting Regulation (B.C. Reg. 187/2017) hazardous material spill, a review will be conducted and a report issued to ensure that the required design changes and/or procedures are in place to avoid a repeated spill.
Transportation accident – hazardous materials, excluding fuel	Damage to aquatic life and downstream human environment	Possible	**Major (Level 4)**	High	Measures identified in the Chemicals and Materials Storage, Transfer, and Handling Plan (Appendix 9-M in BW Gold 2021).	The first goal will be to ensure public and worker health and safety. Residents nearby a spill will be notified by the Mine Manager or designate and apprised of the nature and extent of the spill. Potential ignition sources will be removed in the event of a spill of flammable or combustible materials if safely possible, and the spill will be stopped. Appropriate corporate and external personnel will be notified, and an assessment will be conducted to determine the best means to prevent immediate environmental impacts. Spill countermeasures will include the use of absorbent materials, establishment of a collection trench downslope, and setting collection booms on water if effective for the spilled material. Work closely with local authorities, including the Emergency Management BC to manage, clean up, and remediate the impacted area. Following a reportable spill as defined under the BC Spill Reporting Regulation (B.C. Reg. 187/2017) hazardous material spill, a review will be conducted and a report issued to ensure that the required design changes and/or procedures are in place to avoid a repeated spill.

Accident or Malfunction	Issue of Concern	Likelihood	Consequence	Risk Score	Mitigation Measures	Response
Transportation accident – non-hazardous materials and work crews	Damage to terrestrial and aquatic habitat if release is near surface water	Likely	**Moderate (Level 3)**	High	Measures identified in the Construction Environmental Management Plan (Appendix 9-C in BW Gold 2021) and Mine Site Traffic Management Plan (Appendix 9-K in BW Gold 2021).	For accidents involving non-hazardous materials or crew buses, the first goal will be to ensure public and worker health and safety. Thereafter, appropriate corporate and external personnel will be notified as appropriate, and spilled material will be removed. The affected environment will be rehabilitated as needed. After any major accident, a review will be conducted to ensure that the required design changes and/or procedures are in place to avoid a repeated spill. Work closely with local authorities to ensure public health and safety is maintained at all times.
Environmental Control Dam (ECD) failure	Damage to terrestrial and aquatic habitat; change in water quality in freshwater reservoir	Very Rare	**Major (Level 4)**	Medium	Potential environmental effects of a dam failure are mitigated through design, construction, monitoring and maintenance. The dam was designed to contain continuous seepage, daylighting groundwater, and runoff from events up to the 1-in-10-year, 24-hour storm. A riprap lined emergency spillway was designed to pass the 1-in-1,000-year, 24-hour storm. Downstream and upstream dam slopes will be 2H:1V. The ECD will be subject to annual safety inspections and comprehensive dam safety review every 5 years to meet the requirements in Part 10 of the Code (once constructed).	The initial response to any failure at the ECD will be to protect human health and safety. In the event of a failure or imminent failure of the ECD, the MERP will be initiated. Conduct emergency repairs, if safe to do so. The spill will be contained to the extent possible using temporary earthen or snow dams, silt fences, sandbags, and other available equipment. Appropriate spill control equipment will be maintained at the Project site. A water monitoring program will be developed to monitor aqueous concentrations of any contaminants and determine when the freshwater could be used for fisheries management purposes. In the event the water in the freshwater reservoir is contaminated and cannot be directly discharged to Davidson Creek, instream fish needs water can be provided by directly pumping to Davidson Creek from Tatelkuz Lake. There is adequate pumping capacity in the design to provide for the required flows at any time of year.
Forest fire (Project-related)	Human environment and local terrestrial habitat loss, if fire is controlled without delay	Possible	**Moderate (Level 3)**	High	Design facilities to meet applicable fire protection system requirements and BC Fire Code. Buildings such as the explosives storage facility, temporary construction buildings, pump house buildings, and fuel storage tanks will be equipped with fire response equipment and fire suppression infrastructure as required. All light trucks and haul vehicles on site will carry a portable fire extinguisher. A fire pumper truck will be present at the site for use as required. Regular fire drills will occur to ensure that all workers are familiar with fire response procedures. All workers and visitors to the Project site will receive an orientation that includes fire reporting and response procedures.	Priorities for fire response will include protecting human health and ensuring that the fire does not spread. A trained site fire response crew will provide the initial firefighting response, with assistance from local municipal volunteer firefighting services being requested. If local assistance is not sufficient, firefighting resources from Prince George will be called upon for assistance. BW Gold will work closely with local authorities to ensure public health and safety are maintained at all times.
Water supply system (pump failure)	Production delay; Damage to aquatic habitat due to failure of fresh water supply system	Unlikely	**Moderate (Level 3)**	Medium	Pumps will be inspected routinely and maintained. Backup pumps will be maintained on site.	Maintain minimum instream flow needs for fish in Davidson Creek from the freshwater reservoir. Service or replace pump(s).
Sedimentation pond failure (accidental sediment releases into water courses)	Damage to terrestrial aquatic habitat	Unlikely	**Moderate (Level 3)**	Medium	Potential environmental effects are mitigated through design (including siting location), construction, monitoring and maintenance. Design and operation of the sedimentation ponds is based on Technical Guidance 7 Assessing the Design, Size and Operation of Sedimentation Ponds Used in Mining (MOE 2015). Measures identified in the Surface Erosion Prevention and Sediment Control Plan (Appendix 9-A in BW Gold 2021).	Immediately after a spill is detected, corrective actions would be implemented to contain the spill and preserve downstream water quality. Appropriate sedimentation control and spill response supplies will be maintained at the Project site. Ongoing monitoring of downstream surface water quality monitoring stations will provide indication of potential undesired releases further upslope.
Water pipeline failure	Damage to terrestrial and aquatic habitat	Unlikely	**Moderate (Level 3)**	Medium	Implement standard operating procedure for pipeline systems and include inspection and monitoring programs. Contingency pipe will be maintained at site in the event of pipe damage.	In the event of a leak or failure, pumps will be shut down and the pipeline repaired. If required, erosion and sediment control measures such as matting or silt fencing will be employed to prevent overland runoff containing sediments from directly entering a watercourse.

Accident or Malfunction	Issue of Concern	Likelihood	Consequence	Risk Score	Mitigation Measures	Response
Major fuel release during transport to Project	Damage to aquatic habitat and downstream human environment, if release is near surface water; damage to terrestrial habitat if on land	Unlikely	**Moderate (Level 3)**	Medium	Measures identified in the Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021).	Implement the Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021). The primary goal in any accident resulting in a fuel spill will be to ensure public and worker health and safety. Potential ignition sources will be removed in the event of a spill of flammable or combustible materials, if safely possible, and the spill will be stopped or slowed using available equipment. Appropriate corporate and external personnel will be notified, including Emergency Management BC, and an assessment will be conducted to determine the best means to limit immediate environmental impacts. Spill countermeasures may include the use of absorbent materials, establishment of a collection trench, and setting containment booms on water. When fuel is contained by booms, berms, or other means, it may be pumped, skimmed, or mopped with absorbent matting and disposed of in an approved facility designed to manage such wastes. If a spill were to directly enter a fast moving watercourse, it may not be possible to completely contain and remediate the spill. Clean-up, and potentially remediation, will reduce long-term environmental impacts to the extent practical. After any spill, a review will be conducted to ensure that the required design changes, procedures, and appropriate monitoring measures are in place to prevent a repeated incident.
Accidental discharge of effluent streams (sewage treatment plant)	Damage to aquatic life	Possible	**Minor (Level 2)**	Medium	Operation of the sewage treatment plants will be monitored and any off-specification discharge addressed immediately. Mine service employees will be designated and trained to operate the treatment plants. Ongoing monitoring of site contact water quality will identify potential issues related to water quality.	In the event that the sewage treatment plant operator cannot address the off-specification discharge, a manufacturer's engineer will be brought to site to resolve the sewage treatment plant water quality issue. The source of the poor water quality will be determined and operational or design changes made as appropriate. BW Gold will work closely with local authorities to ensure public and environmental health and safety is maintained at all times. For any chronic effluent quality issues, a review will be conducted to ensure that the required design changes and procedures are in place to ensure that poor effluent quality will not be repeated.
Power outages	Damage to aquatic habitat due to failure of freshwater supply system	Possible	**Minor (Level 2)**	Medium	Periodically, on a schedule set by the Mine Manager (or designate), all emergency power systems will be checked and tested.	Standby generators will be utilized for system critical facilities.
Freshwater reservoir failure	Erosion in Davidson Creek from sudden, large volume release, damage to terrestrial and aquatic habitat	Very Rare	**Minor (Level 2)**	Low	Potential environmental effects of a dam failure are mitigated through design, construction, monitoring and maintenance. Relevant sections of the Code include: section 3.7.1 (requires a mine emergency response plan; Appendix 9-J of the Application); section 10.1.4 (identifies design standards for impoundments, tailings storage facility and water management facilities and day; Appendix 3-O of the Application); section 10.5.3 (requires annual dam safety inspection; once constructed); section 10.5.4 (requires dam safety reviews at least every 5 years; once constructed) and section 10.4.2 (oversight by an Independent Tailings Review Board; once constructed). Geotechnical instrumentation will be installed to monitor dams.	In the event of a failure or imminent failure of the freshwater reservoir, an emergency repair will occur once if is safe to do so. Pumping from Tatelkuz Lake will immediately cease. A bypass line will already be in place to maintain flow to Davidson Creek. Silt fences, sandbags, and other erosion and sediment control measures will be deployed to prevent the entry of surface materials into downstream watercourses. Appropriate spill control equipment will be maintained at the Project site.
Low grade ore (LGO) stockpile slope failure	Damage to terrestrial and aquatic habitat	Unlikely	**Minor (Level 2)**	Low	Potential environmental effects are mitigated through design, construction, monitoring and maintenance. Measures are provided in the Mine Site Water and Discharge Monitoring and Management Plan (MSDP; Appendix 9-E in BW Gold 2021).	Secure the failure area. Stockpile slope will be re-contoured in place depending on the scale of the failure. If the slope failure caused a liquid spill, silt fencing or other erosion and sediment control measures such as a temporary sediment retention pond would be deployed downslope of the spill to prevent sediment-laden waters from entering a watercourse.

Accident or Malfunction	Issue of Concern	Likelihood	Consequence	Risk Score	Mitigation Measures	Response
Topsoil stockpile slope failure	Damage to terrestrial habitat	Unlikely	**Minor (Level 2)**	Low	Potential environmental effects are mitigated through design, construction, monitoring and maintenance. Measures are provided in the MSDP (Appendix 9-E in BW Gold 2021).	Secure the failure area. Stockpile slope will be re-contoured in place depending on the scale of the failure. If the slope failure caused a liquid spill, silt fencing or other erosion and sediment control measures such as a temporary sediment retention pond would be deployed downslope of the spill to prevent sediment-laden waters from entering a watercourse. Inspect and if required, repair perimeter water management structures. Review and if required, modify design criteria for stockpiles under construction.
Tailings pipeline failure	Damage to terrestrial and aquatic habitat	Unlikely	**Minor (Level 2)**	Low	Potential environmental effects are mitigated by avoiding and preventing a dam breach through design, construction, monitoring, and maintenance. Part 10 of the Code identifies design standards for impoundments, tailings storage facility and water management facilities and dam (Appendix 3-K of the Application). An operations, maintenance, and surveillance manual will be developed for the TSF.	If a leak or failure is detected in the tailings pipeline, flow to the faulty pipeline will cease. Heavy equipment will be used along with spill containment materials to contain or limit the discharge of tailings and effluent in an uncontrolled manner to the environment. Depending on the amount of tailings spilled and whether tailings enter Davidson Creek, a remedial action plan may be developed in consultation with appropriate regulatory agencies. Spilled tailings will be excavated and loaded on a haul truck, or vacuumed, and transported to the TSF.
Fly rock from blasting	Health and safety issue	Possible	**Insignificant (Level 1)**	Low	A blasting plan guides blasting in the open pit. Prior to blasting in the open pit, areas within the range of fly rock will be cleared, access roads blocked, and all mine staff warned that a blast will occur. A sweep of all areas within the blast zone will be conducted by the pit foreman or designate prior to the blast.	With these controls in place and with only certified employees setting off blasts, no accidents are expected. Road blocks set up prior to blasting as a safety measure for fly rock will be removed immediately after the blast by mine services personnel, if required.
Waste stockpile failure	Damage to terrestrial and aquatic habitat	Unlikely	**Insignificant (Level 1)**	Low	Potential environmental effects are mitigated through design, construction, monitoring and maintenance.	Secure the failure area. Stockpile slope will be re-contoured in place depending on the scale of the failure. If the slope failure caused a liquid spill, silt fencing or other erosion and sediment control measures such as a temporary sediment retention pond would be deployed downslope of the spill to prevent sediment-laden waters from entering a watercourse. Undertake a geotechnical stability analysis following a major stockpile failure.
Aircraft accidents on site	Damage to terrestrial and aquatic habitat	Unlikely	**Insignificant (Level 1)**	Low	Measures identified in the Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021).	Implement the MERP Appendix 9-11; BW Gold 2021) and other relevant management plan(s) (i.e., Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021).
Open pit slope failure during Operations	Damage to habitat and limited flooding of open pit	Very Rare	**Insignificant (Level 1)**	Low	Potential environmental effects are mitigated through design, construction, monitoring and maintenance. As required by the Code, there will be continuous geotechnical monitoring of pit wall stability directed by qualified geotechnical engineers during pit excavation. Falling rocks will generally be captured by the safety berms. The safety berms will be designed to catch falling rock; however, in some instances, falling rock could reach the open pit floor. Safety berms, or catch benches, will be spaced (vertically and horizontally) to collect the different types of rock (e.g., overburden or bedrock). For example, catch benches could be placed every 24 m vertically and may be between 12 m and 20 m wide. If a catch bench fills up, it will be cleaned out. Adhere to requirements of the Health, Safety and Reclamation Code for Mines in British Columbia (BC EMLI 2021) as it pertains to catch benches.	In the unlikely event workers are injured by slope failure, emergency response procedures in the MERP will be followed. There are well established engineering analysis response procedures required following an open pit slope failure in conjunction with requirements under the *Mines Act* and Code.

Accident or Malfunction	Issue of Concern	Likelihood	Consequence	Risk Score	Mitigation Measures	Response
Explosives accident outside pit	Damage to terrestrial and aquatic habitat	Very Rare	**Insignificant (Level 1)**	Low	Explosives magazine and manufacturing area will be located in accordance with the guidelines in the Quantity Distance Principles User's Manual published by the Explosives Regulatory Division of Natural Resources Canada. All companies that transport explosive materials for the Project will be required to comply with the federal *Transportation of Dangerous Goods Act* and provincial *Transport of Dangerous Goods Act.* A blasting plan will be developed describing all blasting operations. Destruction of explosives (such as those unfit for use) and misfires will be handled according to applicable regulatory instruments. Contract an experienced explosives company that has well-trained employees, follows regulatory requirements, and uses good housekeeping practices.	Initiate the MERP.
Fuel releases from storage facilities and dispensing areas	Damage to terrestrial habitat	Almost certain	**Insignificant (Level 1)**	Medium	Measures identified in the Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021).	Implement the Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021). If fuel escapes from the secondary containment, the Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021) will be implemented. The primary focus will be ensuring human health and safety. When the area is secured, the leak or failure will be sealed, if feasible, by trained workers. Absorbent materials and a downstream berm (earthen or snow) will be constructed to contain the spill. A large spill kit will be located at the fuel storage facility and will include absorbent material. Spilled fuel will be collected and hauled off site for disposal. Used absorbent material would be sent off site to be disposed at a licensed facility. Notification and/or reporting will follow provincial requirements (Ministry of Environment) and other applicable requirements. Soils in the vicinity of the spill will be tested for hydrocarbons and the affected soils delineated. Impacted soil will be hauled off site for treatment and disposal.
Spills of hazardous substances within engineered containment	None	Almost certain	**Insignificant (Level 1)**	Medium	Measures identified in the Chemicals and Materials Storage, Transfer, and Handling Plan (Appendix 9-M in BW Gold 2021).	Implement the Chemicals and Materials Storage, Transfer, and Handling Plan Appendix 9-M in BW Gold 2021).
Contact with wildlife on roadway*	Wildlife kill; health and safety issue	n/a	**n/a**	n/a	Measures identified in the Wildlife Mitigation and Monitoring Plan (Appendix 9-H in BW Gold 2021).	Implement the Wildlife Mitigation and Monitoring Plan (Appendix 9-H in BW Gold 2021).

Accident or Malfunction	Issue of Concern	Likelihood	Consequence	Risk Score	Mitigation Measures	Response
Water treatment plant failure/ shutdown**	n/a	n/a	**n/a**	n/a	An uninterruptible power supply is included in the system to maintain power to control hardware and safety systems in the event of a power outage. Water would be stored in the open pit sump in the event that the metals treatment pond reaches its maximum capacity. The treatment system does not have to operate under average climate conditions and/or drier than usual periods. Therefore, it is possible that the system may not need to operate continuously for an extended period of time. Ultimately, as climate is unpredictable, the treatment system must be ready to start-up and ramp-up to the maximum plant capacity quickly when needed. The system must also be easy to shut down and seasonally store in an offline state when needed. Finally, due to winter freeze-up and water flows being subject to spring freshet, systems conducive to seasonal operation would be beneficial. An RO based treatment system meets all of those requirements. Response steps in the event of higher than predicted WTP influent concentrations are discussed in the Joint *Mines Act / Environmental Management Act* Permits Application (Section 9.6, Mine Site Water and Discharge Monitoring and Management Plan).	The WTP will maintain and implement a current OMS manual.

Source: Table adapted from New Gold 2015.

** Note that this was not assessed in the Application/EIS (New Gold 2015.*

*** Note that this was not assessed in the Application/EIS (New Gold 2015), but is required by the Decision Statement.*

3. ROLES AND RESPONSIBILITIES

BW Gold has the obligation of ensuring that all commitments are met and that all relevant obligations are made known to mine personnel and site contractors during all phases of the mine life. A clear understanding of the roles, responsibilities, and level of authority that employees and contractors have when working at the mine site is essential to meet Environmental Management System (EMS) objectives.

Table 3-1 provides an overview of general environmental management responsibilities during all phases of the mine life for key positions that will be involved in environmental management. Other positions not specifically listed in Table 3-1 but who will provide supporting roles include independent environmental monitors, Independent Tailings Review Board, TSF qualified persons, and other qualified persons and qualified professionals.

Table 3-1: Blackwater Roles and Responsibilities

Role	Responsibility
Chief Executive Officer	The CEO is responsible for overall Project governance. Reports to the Board.
Chief Operating Officer	The COO is responsible for engineering and Project development and coordinates with the Mine Manager to ensure overall Project objectives are being managed. Reports to CEO.
Vice President (VP) Environment & Social Responsibility	The VP Environment & Social Responsibility is responsible for championing the Environmental Policy Statement and EMS, establishing environmental performance targets and overseeing permitting. Reports to COO.
General Manager (GM) – Development	The GM Development is responsible for managing project permitting, the Project's administration services and external entities, and delivering systems and programs that ensure Artemis's values are embraced and supported: Putting People First, Outstanding Corporate Citizenship, High Performance Culture, Rigorous Project Management and Financial Discipline. Reports to COO.
Mine Manager	The Mine Manager, as defined in the *Mines Act*, has overall responsibility for mine operations, including the health and safety of workers and the public, EMS implementation, overall environmental performance and protection, and permit compliance. The Mine Manager may delegate their responsibilities to qualified personnel. Reports to GM.
Construction Manager (CM)	The CM is accountable for ensuring environmental and regulatory commitments and obligations are being met during the construction phase. Reports to GM.
Environmental Manager (EM)	The EM is responsible for the day-to-day management of the Project's environmental programs and compliance with environmental permits, tracking and reporting of key performance indicators updating the EMS and environmental management plans (EMPs). Supports the CM and reports to Mine Manager.
Departmental Managers	Departmental Managers are responsible for implementation of the EMS relevant to their areas. Report to Mine Manager.
Indigenous Relations Manager	Indigenous Relations Manager is responsible for Indigenous engagement throughout the life of mine. Also responsible for day-to-day management and communications with Indigenous groups. Reports to EM.
Communications Coordinator	The Communications Coordinator is responsible for is responsible for developing communication processes and procedures during a potential mine emergency situation as well as establishment and testing of communication systems. Reports to Mine Manager.
Community Relations Advisor	Community Relations Advisor is responsible for managing the Community Liaison Committee and Community Feedback Mechanism. Reports to Mine Manager.

Role	Responsibility
Environmental Monitors	Environmental Monitors (include Environmental Specialists and Technicians) are responsible for tracking and reporting on environmental permit obligations through field-based monitoring programs. Reports to EM.
Indigenous Monitors	Indigenous Monitors are required under EAC condition 17 and will be responsible for monitoring for potential effects from the Project on the Indigenous interests. Indigenous Monitors will be involved in the adaptive management and follow-up monitoring programs.
Employees and Contractors	Employees are responsible for being aware of permit requirements specific to their roles and responsibilities. Report to departmental managers.
Qualified Professionals and Qualified Persons	Qualified professionals an qualified persons will be retained to review objectives and conduct various aspects of environmental and social monitoring as specified in EMPs and social management plans.

Prior to the start of Construction, BW Gold will identify a Communications Coordinator, a critical role in the context of the ACMP.

BW Gold will employ a qualified person as an EM who will ensure that throughout the construction phase the EMS requirements are established, implemented and maintained, and that environmental performance is reported to management for review and action. The EM is responsible for retaining the services of qualified persons or qualified professionals with specific scientific or engineering expertise to provide direction and management advice in their areas of specialization. The EM will be supported by a staff of Environmental Monitors that will include Environmental Specialists and Technicians and by a consulting team of subject matter experts in the fields of environmental science and engineering.

During the Construction phase, the EPCM contractor and sub-contractors, will report to the CM. The EPCM contractor will be responsible for ensuring that impacts are minimized, and environmental obligations are met during the Construction phase. For non-EPCM contractors, who will perform some of the minor works on site, the same reporting structure, requirements, and responsibilities will be established as outlined above. BW Gold will maintain overall responsibility for management of the construction and operation of the mine site, and will therefore be responsible for establishing employment and contract agreements, communicating environmental requirements, and conducting periodic reviews of performance against stated requirements.

The CM is accountable for ensuring that environmental and regulatory commitments/obligations are being met during the construction phase. The EM will be responsible for ensuring that construction activities are proceeding in accordance with the objectives of the EMS and associated MPs. The EM or designate will be responsible for reporting non-compliance to the CM and EPCM contractor, other contractors, and regulatory agencies, where required. 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.

Environmental management during operation of the Project will be integrated under the direction of the EM, who will liaise closely with departmental managers and will report directly to the Mine Manager. The EM will be supported by the VP of Environment and Social Responsibility in order to provide an effective and integrated approach to environmental management and ensure adherence to corporate environmental standards. The EM will be accountable for implementing the approved MPs and reviewing them periodically for effectiveness. Departmental area managers (e.g., mining, milling, and plant/site services) will be directly responsible for implementation of the EMS and MPs/SOPs relevant to their areas. All employees and contractors are responsible for daily implementation of the practices and policies contained in the EMS.

During Closure and Post-Closure, staffing levels will be reduced to align with the level of activity associated with these phases. Prior to initiating Closure activities, BW Gold will revisit environmental and health and safety roles and responsibilities to ensure the site is adequately resourced to meet permit monitoring and reporting. The Mine Manager will maintain overall responsibility for management of Closure and Post-Closure activities.

Pursuant to Condition 19 of the Project's Environmental Assessment Certificate #M19-01 (EAC), BW Gold has established an Environmental Monitoring Committee (EMC) to facilitate information sharing and provide advice on the development and operation of the Project, and the implementation of EAC conditions, in a coordinated and collaborative manner. Committee members include representatives of the Environmental Assessment Office (EAO), UFN, LDN, NWFN, StFN, SFN, NFN, Ministry of Energy, Mines and Low Carbon Innovation (EMLI), Ministry of Environment and Low Carbon Innovation (ENV), and Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD).

Pursuant to Condition 17 of the EAC, Aboriginal Group Monitor and Monitoring Plan, BW Gold will retain or provide funding to retain a monitor for each Indigenous group prior to commencing construction and through all phases of the mine life. The general scope of the monitor's activities will be related to monitoring for potential effects from the Project on Indigenous interests.

4. COMPLIANCE OBLIGATIONS, GUIDANCE, AND BEST MANAGEMENT PRACTICES

4.1 Legislation

Federal legislation that applies to accidents and malfunctions includes:

- *Canadian Environmental Protection Act*, *1999*;
  - *Environmental Emergency Regulations;*
- *Fisheries Act;*
  - *Metal and Diamond Mining Effluent Regulations;*
- *Transportation of Dangerous Goods Act*;
  - *Transportation of Dangerous Goods Regulation* (TDG Regulation).
- *Explosives Act*

Provincial legislation that applies to accidents and malfunctions includes:

- *Drinking Water Protection Act;*
- *Environmental Management Act;*
  - *Spill Reporting Regulation;*
  - *Hazardous Waste Regulation;*
- *Public Health Act;*
- *Mines Act;*
  - Health, Safety and Reclamation Code for Mines in British Columbia (Code; EMLI 2021);
- *Transport of Dangerous Goods Act;* and
  - *Transport of Dangerous Goods Regulation.*
- *BC Motor Vehicle Act*

4.2 Environmental Assessment Certificate and Federal Decision Statement Conditions

The ACMP addresses:

- EAC Condition 36, which requires the development of this plan; and
- DS Conditions 10.1, 10.2, 10.3, 10.4 and 10.5, which requires the development of this plan.

Concordance tables identifying where the requirements in the EAC and DS are located in the ACMP are provided in Appendix A and B, respectively.

4.3 Existing Permits

Aside from the EAC and DS conditions, there are no requirements in existing Blackwater permits relating to the scope of the ACMP.

4.4 Guidance and Best Management Practices

Guidance documents related to accidents and malfunctions include:

- Emergency Response Roles and Responsibilities (Northern Health Emergency Management 2019);
- Implementation Guidelines for Part 8 of the *Canadian Environmental Protection Act, 1999* – Environmental Emergency Plans (2004); and
- Canada Canadian Standards Association. Emergency Preparedness and Response (CSA-Z731-03) (R2014).

5. ENGAGEMENT AND CONSULTATION

BW Gold provided a pre-submission draft of this ACMP to Indigenous groups and relevant regulatory agencies on November 15, 2021; comments were received from UFN/LDN and Northern Health. BW Gold has incorporated comments received and/or provided a response to the respective groups regarding how the comment was considered.

6. TRAINING AND AWARENESS

BW Gold will implement a defined training plan for individuals named in emergency procedures to ensure key personnel are aware of emergency response protocols and their responsibilities during an emergency. The training plan will include Indigenous and stakeholder notification requirements associated with the ACMP. Project employees and contractors will be made aware of the communication protocol during initial site orientation training.

6.1 Practice Drills

BW Gold will conduct practice drills to evaluate performance of personnel during mine emergencies and to develop and build upon a reliable response system. Simulation exercises will occur annually as per the federal *Environmental Emergency Regulations*, at a minimum, and will cover all actions ranging from the moment of discovery, marshalling, deployment of emergency response teams, and regulatory and Indigenous and stakeholder notifications. A record of the practice drills performed and corresponding learnings and corrective actions are kept on file and reviewed regularly to improve emergency response procedures.

Prior to conducting emergency response drills where external parties are involved, BW Gold will make enquiries to Indigenous groups and stakeholders to ascertain whether there is interest in participating or observing the emergency response drills. If there is interest, efforts will be made to allow for participation of Indigenous groups and stakeholders.

7. NOTIFICATION PROCEDURES AND RESPONSE ASSISTANCE

This section details notification procedures related to accidents and malfunctions.

Consequence levels are based on incidents presented in Table 2.2-3. A summary of the communication protocol is provided in Table 7-1. Notice will be provided by the responsible person(s) as set out in the MERP. Appendix C contains BW Gold's Operational Risk Management Procedure.

Non-BW Gold owned water licenses within 30 kilometers of the mine site are provided in Table 7-2.

Table 7-1: Communication Protocol Summary

Consequence Level	When to Notify	Who to Notify	Type of Notification
Insignificant[1] (Level 1)	Within 30 days	Indigenous Monitors	■ Email notification ■ Include incident in monthly environmental update report to Indigenous groups and stakeholders
Minor[2] (Level 2)	Within 48 hours	Indigenous Monitors EMC Members	■ Phone nearby residents and businesses (if required) ■ Initial report via email ■ Include in monthly environmental update report ■ Incident and compliance reporting to provincial authorities will be provided to Indigenous groups concurrently
Moderate (Level 3)	Within 24 hours	Indigenous Monitors EMC Members Health Emergency Management BC Impact Assessment Agency of Canada (IAAC) and EAO Compliance and Enforcement (C&E)	■ Call or Instant Message ■ Phone Indigenous groups, EMC members ■ Phone EAO and IAAC C&E (if required) ■ Phone nearby residents and businesses (if required) ■ Follow-up email to all of the above within 48 hours of initial report Include in monthly environmental update report ■ All incident and compliance documented reporting to provincial authorities will be provided to Indigenous groups concurrently
Major (Level 4) Catastrophic (Level 5)	Immediately (day or night)	Indigenous Monitors EMC Members Chiefs of all Nations Health Emergency Management BC IAAC and EAO C&E Nearby Local Government, Residents and Businesses	■ In person or phone Instant Message ■ Phone Indigenous groups, EMC members ■ Phone Chief of each Nation ■ Phone nearby local governments, residents and businesses ■ Phone IAAC and EAO C&E ■ Follow-up email to all of the above within 24 hours Include in monthly environmental update report ■ All incident and compliance reporting to provincial authorities will be provided to Indigenous groups concurrently

Notes:

[1] Includes fuel spills classified as Level 1 (less than BC reportable threshold quantity of 100 L).

[2] Includes fuel spills classified as Level 2 (greater than the BC reportable threshold quantity of 100 L or material enters or is likely to enter a body of water) or 3 (greater than BC reportable threshold quantity of 100 L and may leave site boundaries).

[3] Includes any substance that requires immediate reporting (as per Spill Reporting Regulation).

Table 7-2: Water Licences within 30 Kilometres of the Mine Site

Type	Licence #	Registered Owner	Use	Contact
Groundwater Well	121688	Canadian Forest Products Ltd.	Commercial and Industrial	Prince George Sawmill 250-962-4700
	119368	Canadian Forest Products Ltd.	Commercial and Industrial	
	95996	TTM Resources	Water Supply System	TTM Resources (General) 604-685-1144
	113343	Lhoosk uz Dene Nation	Unknown	Neil Gauthreau Natural Resource Manager 250-992-3290
	113351	Lhoosk us Dene Nation	Water Supply	
	98638	Kluskus First Nation	Water Supply System	
	98643	Kluskus First Nation	Water Supply System	
	98647	Kluskus First Nation	Water Supply System	
	N/A	Mills Ranch	Unknown	Wayne Kennedy Ranch Manager 250-570-8097

7.1 Accident and Malfunction Types Requiring Notification

Indigenous nations and stakeholders will be notified of the accident and malfunctions presented in Table 2.2-3 as per the communication protocol summarized in Table 7-1. If a specific accident or malfunction occurs that is not listed in Table 2.2-3, but has a similar environmental consequence, Indigenous nations and stakeholders will be notified in accordance with the procedure outlined Table 7-1. Project-related accidents that occur outside the mine boundary (for example, transportation accidents involving dangerous goods) may require the same minimum communication protocols and regulatory notice requirements, however, will be dealt with on a case-by-case basis as carriers may need to implement their own ERAP (Emergency Response Assistance Plans as per the federal TDG Regulations). Communications protocols on these events will be managed but there will be timely communication between BW Gold and the transportation carriers internally to ensure no duplication of reporting.

7.2 Notification Timeline

Notification timeline will be determined based on consequence ratings presented in Table 2.2-3. Events with a consequence rating of “Catastrophic” and “Major” will be reported to Indigenous groups and stakeholders in accordance with the communication protocol summarized in Table 7-1. Accident and malfunctions with a consequence rating of “Moderate” and “Minor” are considered to have a moderate but reversible effect, and will also be reported to Indigenous groups and stakeholders in accordance with Table 7-1. Accidents and malfunctions with a consequence rating of “Insignificant” are considered to have a small and localized effect and will be reported to Indigenous nations and stakeholders within 30 days to align with the BC Spill Reporting Regulation.

7.3 Notification Information

Information to be provided in the initial notification to Indigenous groups and stakeholders will include:

- Date and location of the event;
- Summary description of the event;

- Information on the accident or malfunction, including type and quantity of substance(s) released, location and duration of releases and potential impacts caused by the release;
- Remedial actions taken to date and those planned to be undertaken and a target schedule for implementation;
- Resources available and resources required;
- Any health advisories for applicable Indigenous groups and stakeholders; and
- Details of subsequent monitoring related to the accident or malfunction.

Monitoring will be determined in consultation with regulatory authorities, the EMC, and Indigenous groups who are not EMC members, and will be informed by regulatory requirements pertaining to the accident or malfunction. Reporting will follow regulatory requirements, which may include more information than identified in the bullets above.

7.4 Notification Methods

Initial notification to Indigenous groups and stakeholders (all incident classifications) will be provided by the responsible person(s) as set out in the MERP using the phone number BW Gold maintains in the ACMP (see Tables 7.6-2 to 7.6-5). Telephone notification will be followed by an email that includes the information presented in Section 7.3, along a with read-receipt confirmation request.

For public users who may be in the vicinity of the mine site, signs posted on the Kluskus-Oosta FSR near the Mine Access Road turnoff will encourage users to report their presence to Blackwater mine security, along with their approximate destination and available method of communication. In the event of an accident and malfunction listed in Section 2.2 of the ACMP, BW Gold will attempt to contact potentially effected users and notify them of the event.

7.5 Opportunities to Assist with Accident or Malfunction Response

Although a mutual emergency aid agreement for Blackwater does not currently exist, BW Gold intends to enter into such agreements in an effort to work with nearby industrial operations for emergency aid purposes during all phases of the mining operations. BW Gold intends to begin evaluation of potential opportunities during the Construction period. Additionally, for the transportation of hazardous substances to and from site, BW Gold will verify that transporters requiring ERAPs have adequate ERAPs through the procurement process and by periodic audits at the gatehouse. BW Gold may provide gear and personnel to assist with highway incidents on a case-by-case basis at the discretion of the Mine Manager and Mine Rescue Team (MRT). Further, BW Gold will solicit input from Indigenous groups and stakeholders on their relevant experience and capabilities to provide emergency response services and/or assist with response to an accident or malfunction, and to keep contact information in the ACMP up to date.

7.6 Contact Information and Management

A separate call-out sheet attached to the ACMP provides emergency contact information for Indigenous groups, local governments, nearby residents and businesses, and other users of the Project area who could be affected by an accident or malfunction (Appendix D[1]). As the call-out sheet contains 24-hour private contact information, it is not for general distribution. The updated drafts are made available to each department with controls for the version and number of copies.

[1] For this Application, Appendix D is the placeholder for the call-out sheet. For reasons of privacy, the call-out sheet can be supplied to reviewers upon request but is not available for general distribution.

Procedures for updates to the call-out sheet are as follows:

- Contact information is confirmed or updated annually, at a minimum;
- Confirmation is done through a procedure listed for each contact, in instances, where the procedure does not result in a contact then a request to the broader organization is initiated in order to update the contact information;
- Contact individuals and organizations can also initiate and update information and are encouraged to do so;
- Procedures for updating the contact information are adapted through time and customized to fit the contact individual or organization;
- Updates are logged on the call-out sheet with the changes to the version date of the call-out sheet, last review date for each contact, next review date for each contact, and the call-out procedure, if required;
- The updated call-out sheet is immediately sent out to the relevant departments as a replacement; and
- The previous hardcopy version of the call-out sheet is destroyed with the master digital copy archived.

7.7 Project Vehicle-related Accidents

Vehicle-related accidents have the potential for a higher incidence and more variable outcome than other accident types, the communication of Project vehicle-related accidents is provided in Section 7 of the Notification Procedures and Response Assistance of the AMCP but the specific measures for avoidance, mitigation, and contingency measures are comprehensively presented in other plans. Depending on the consequence of the Project vehicle-related accident, the following plans may support the communication of a vehicle-related accident:

- Mine Site Traffic Control Plan (Appendix 9-K in BW Gold 2021) – procedures for vehicle operation and road controls within and outside the mine site. All Project-related vehicles carry first aid kits and fire extinguishers in accordance with the BC Fire Code. Depending on the vehicle usage, Project vehicles may carry additional equipment, e.g., spill control kits.
- Fuel Management and Spill Control Plan (Appendix 9-L in BW Gold 2021) – procedures for vehicle accidents resulting in spills of gasoline, diesel, oils, or transported materials.
- MERP (Appendix 9-C in BW Gold 2021) – response framework for vehicle accidents that require emergency response for: spills, and incidences including injury, fires, and explosions. The Blackwater MRT is trained in mine rescue, materials handling, firefighting, crisis management, and incident command.

8. REPORTING AND RECORD KEEPING

8.1 Reporting

BW Gold will comply with all EAC and DS reporting requirements as they apply to this ACMP. The EM will be responsible for maintaining incident response records throughout the year and for inclusion in the relevant annual report.

8.1.1 Environmental Assessment Certificate Reporting

Condition 5 of the EAC identifies compliance verification and reporting requirements as follows:

> "The Holder [BW Gold] must submit a report to the attention of the EAO and Aboriginal Groups on the status of compliance with this Certificate at the following times:
>
> a) at least 30 days prior to the start of Construction;
>
> b) on or before March 31 in each year after the start of Construction;
>
> c) at least 30 days prior to the start of Operations;
>
> d) on or before March 31 in each year after the start of Operations;
>
> e) at least 30 days prior to the start of Closure;
>
> f) on or before March 31 in each year after the start of Closure until the end of Closure;
>
> g) at least 30 days prior to the start of Post-Closure; and
>
> h) on or before March 31 in each year after the start of Post-Closure until the end of Post-Closure."

8.1.2 Decision Statement Reporting and Information Sharing

Reporting and information sharing requirements in the federal DS applicable to the ACMP are identified below.

Conditions 2.11, 2.12, 2.13, and 2.14 identify annual reporting and information sharing requirements as follows:

- Condition 2.11 requires "The proponent [BW Gold] shall, commencing in the reporting year during which the proponent begins the implementation of the conditions set out in the DS, prepare an annual report that describes the activities undertaken by the proponent [BW Gold] in the reporting year to comply with each condition in the DS" as well as other matters identified in the Condition.
- Condition 2.12 requires "The proponent [BW Gold] shall provide a draft annual report in condition 11 to Indigenous groups, no later than June 30 following the reporting year to which the annual report applies. BW Gold shall consult the Indigenous groups on the content and findings in the draft annual report".
- Condition 2.13 requires "The proponent [BW Gold] in consideration of any comments received from Indigenous groups pursuant to condition 2.12, shall revise and submit to the Agency [Impact Assessment Agency of Canada] and Indigenous groups a final annual report, including an executive summary in both official languages, no later than September 30 following the reporting year to which the annual report applies".
- Condition 2.14 requires "The Proponent shall publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.11 and 2.13, the offsetting plan(s) referred to in condition 3.11, the compensation plan referred to in condition 8.18

and, if required, condition 5.3, the whitebark pine management plan referred to in condition 8.20, the communication plans referred to in conditions 6.15 and 10.5, the reports related to accidents and malfunctions referred to in conditions 10.4.2 and 10.4.3, the schedules referred to in conditions 11.1 and 11.2, and any update(s) or revision(s) to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 25 years following the end of decommissioning of the Designated Project. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within 48 hours of their publication."

Condition 10.4.2 and 10.4.3 require event-based reporting as follows:

- Condition 10.4.2 requires "submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include:
  - a detailed description of the accident or malfunction and of its adverse environmental effects;
  - a description of the measures that were taken by the Proponent to mitigate the adverse environmental effects caused by the accident or malfunction;
  - any view(s) from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures taken by the Proponent to mitigate these adverse environmental effects;
  - a description of any potential residual adverse environmental effects and any modified or additional measures required by the Proponent to mitigate residual adverse environmental effects; and
  - details concerning the implementation of the accident or malfunction response plan referred to in condition 10.3."
- Condition 10.4.3 requires: "submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) implemented by the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 10.4.2. The report shall include all additional views from Indigenous groups and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 10.4.2.3 were received by the Proponent."

8.1.3 Incident Response Records

Responses to accident or malfunction, including vehicle-related fires or explosions, will be documented in incident response reports and used to inform preparation of the DS and EAC annual reports and also inform adaptive management.

As required by Condition 10.4.2, in the event of an accident or malfunction with the potential to cause adverse environmental effect (which includes any accident or malfunction set out in Table 2.2-1 that is said to have the potential to have an adverse environmental effect in the Application/EIS (New Gold 2015)), a report will be submitted to IAAC no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include:

- A detailed description of the accident or malfunction and of its adverse environmental effects;
- A description of the measures that were taken to mitigate the adverse environmental effects caused by the accident or malfunction;

- Any view(s) from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures taken by the Proponent to mitigate these adverse environmental effects;
- A description of any potential residual adverse environmental effects and any modified or additional measures required by the Proponent to mitigate residual adverse environmental effects; and
- Details concerning the implementation of the accident or malfunction response plan.

Also, as required by Condition 10.4.3, a written report will be submitted to IAAC no later than 90 days after the accident or malfunction occurred. This report will include a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) implemented to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation. Any modified or additional measure will take into account the information submitted in the written report pursuant to Condition 10.4.2 (above). This report shall include all additional views from Indigenous groups and advice from relevant authorities received since the report written pursuant to Condition 10.4.2.

8.1.4 Record Keeping

Conditions 12.1 and 12.2 of the federal decision statement identify requirements for record keeping as follows:

- Condition 12.1 requires “The Proponent shall maintain all records relevant to the implementation of the conditions set out in this Decision Statement. The Proponent shall retain the records and make them available to the Agency throughout construction and operation and for 25 years following the end of decommissioning of the Designated Project. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency”.
- Condition 12.2 requires “The Proponent shall retain all records referred to in condition 12.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location”.

The EM will be responsible for ensuring practice drill records and incident response reports are prepared, including initial response and communications. The EM will also be responsible for ensuring that communications protocol was followed. Incident response reports will be entered into an electronic database. Records will be maintained and retained in accordance with Conditions 12.1 and 12.2 of the federal DS, respectively. The records will be made available upon request.

9. EVALUATION AND ADAPTIVE MANAGEMENT

The ACMP is a living document that will evolve over time in response to near misses, lessons learned from accidents and malfunctions, and engagement with Indigenous groups and regulatory agencies. The process of improvement is referred to as adaptive management.

The ACMP incorporates adaptive management as follows:

- Plan
  - Identify the types of accidents and malfunctions that require notice to Indigenous and non-Indigenous communities.
  - Identify the information to be included in notifications and reporting timelines.
- Do
  - Implement the ACMP.
- Monitor
  - Submit and publish compliance reports pursuant to Project's EAC and DS.
- Adjust
  - In consultation with Indigenous groups and relevant government agencies, review the effectiveness of the notification provisions in the ACMP.
  - If the review identifies changes to notification provisions, modify the provisions and update the ACMP.

The ACMP will be reviewed annually to confirm the requirements in the plan are being implemented and to identify any improvements to ensure objectives are being met. The annual review will include:

- Review notification timelines, content and methods;
- Review and update of contact information Tables 7.6-1 to 7.6-5; and
- Review practice drills records to confirm identified learnings and corrective actions have been implemented.

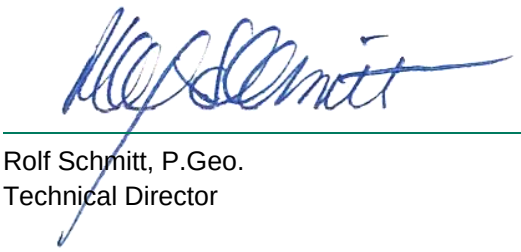
10. PLAN REVISION

The ACMP will be reviewed every twelve months or after each time the plan is implemented, following a major incident, to confirm the plan's effectiveness. Prior to adopting and implementing changes to the ACMP, proposed revisions will be reviewed and discussed with the Blackwater Joint Occupational Health and Safety Committee, Mine Manager, EMC and Artemis Gold staff involved in emergency response. Revised draft and final versions of the ACMP will be provided to EMLI, Health Emergency Management BC, the EMC, and published on the Artemis website as required by DS Condition 2.14.

11. QUALIFIED PROFESSIONALS

This management plan has been prepared by the following qualified professional:

Prepared by:



Rolf Schmitt, P.Geo.
Technical Director

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APPENDIX A CONCORDANCE WITH ENVIRONMENTAL ASSESSMENT CERTIFICATE #M19-01 (JUNE 21, 2019)

Table A-1: Environmental Assessment Certificate #M19-01 Conditions and Location in the Accidents and Malfunctions Administration and Communications Plan

Condition #	Requirement	Location in the Plan
2	**Plan Development** Where a condition of this Certificate requires the Holder to develop a plan, program or other document, any such plan, program or other document must, at a minimum, include the following information: a) purpose and objectives of the plan, program or other document;	Section 2
	b) roles and responsibilities of the Holder and Employees;	Section 3, Table 3-1
	c) names and, if applicable, professional certifications and professional stamps/seals, of those responsible for the preparation of the plan, program, or other document;	Section 11
	d) schedule for implementing the plan, program or other document throughout the relevant Project phases;	Section 2 – The ACMP will be implemented in all Project phases.
	e) means by which the effectiveness of the mitigation measures will be evaluated including the schedule for evaluating effectiveness;	Section 9
	g) schedules and methods for the submission of reporting to specific agencies, Aboriginal Groups and the public and the required form and content of those reports; and	Section 8
	h) process and timing for updating and revising the plan, program or other document, including any consultation with agencies and Aboriginal Groups that would occur in connection with such updates and revisions.	Section 10
3	**Adaptive Management** Where a condition of this Certificate requires the Holder to develop a plan, program or other document that includes monitoring, including monitoring of mitigation measures or monitoring to determine the effectiveness of the mitigation measures, the Holder must include adaptive management in that plan. The objective of the adaptive management is to address the circumstances that will require the Holder to implement alternate or additional mitigation measures to address effects of the Project if the monitoring shows that those effects: a) are not mitigated to the extent contemplated in the Application; b) are not predicted in the Application; or c) have exceeded the triggers identified in paragraph g) of this condition. 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;	Adaptive management does not apply to the ACMP for the reasons provided below. The purpose of the ACMP is to identify the means by which BW Gold will notify Indigenous groups, Tatelkus Lake Indian Reserve 28, nearby residents and businesses, local communities or other user groups should an accident or malfunction occur in relation to the Blackwater Project. It does not include monitoring.

Condition #	Requirement	Location in the Plan
	e) the baseline information that will be used, or collected where existing baseline information is insufficient, to support the monitoring program;	No baseline information is required to be collected and there is no monitoring plan.
	f) the scope, content and frequency of reporting of the monitoring results;	As noted above, the purpose of the ACMP is to identify the means by which BW Gold will notify Indigenous groups, Tatelkus Lake Indian Reserve 28, nearby residents and businesses, local communities or other user groups should an accident or malfunction occur in relation to the Blackwater Project. It does not include monitoring.
	g) 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;	There are no monitoring triggers. Indigenous nations and stakeholders will be notified of the accident and malfunctions presented in Table 2.2--3 (Accidents and Malfunctions Risk Summary) as per Table 7-1 (Communication Protocol Summary).
	h) the methods that will be applied to detect when a numeric trigger, or type or level of change referred to in paragraph g), has occurred.	Indigenous and stakeholder notice provisions are based on the consequence ratings presented in Table 2.2--3.
	i) a description of the process for and timing to alter existing mitigation measures or develop new mitigation measures to reduce or avoid effects;	Section 9 describes the plan's adaptive management framework. The effectiveness of the notification provisions in the ACMP will be reviewed to see if the notification provisions are adequate. This will be done in consultation with Aboriginal Groups and stakeholders. If changes to the provisions are identified, they will be modified and the ACMP updated.

Condition #	Requirement	Location in the Plan
	j) 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;	The ACMP does not identify mitigation measures to reduce or avoid effects. Mitigation measures associated with the potential effects of an accident or malfunction are assessed in management plans required by *the Mines Act / Environmental Management Act* permits application and Code (EMLI 2021). Tables 7.6-1 to 7.6-5 in Section 7.6 of the ACMP provide emergency contact information for Indigenous groups, local governments, nearby residents and businesses, and other users of the Project area who could be affected by an accident or malfunction. Contact information provided in the tables will be confirmed and updated annually, at a minimum, to remain current.
	k) the monitoring program that will be used to determine if the altered or new mitigation measures and/or remediation activities are effectively mitigating or remediating the effects and or avoiding potential effects; and	There is no monitoring program for the ACMP. Section 9 describes the adaptive management framework. This section also describes the items that will be reviewed annually
	l) the scope, content and frequency of reporting on the implementation of altered or new mitigation measures.	Section 8 describes the reporting associated with the ACMP.
	If there are any requirements or mitigation measures required in the plan, program or other document for which adaptive management, or elements of adaptive management listed in paragraphs d) to l) are assessed to be not appropriate or applicable, the plan must include identification of those requirements and measures, and the rationale for that assessment.	Not all requirements are directly applicable as indicated above.

Condition #	Requirement	Location in the Plan
4	**Consultation** Where a condition of this Certificate requires the Holder consult a particular party or parties regarding the content of a plan, program or other document, the Holder must, to the satisfaction of the EAO: a) provide written notice to each such party that: i) includes a copy of the plan, program or other document; ii) invites the party to provide its views on the content of such plan, program or other document; and iii) indicates: i. if a timeframe for providing such views to the Holder is specified in the relevant condition of this Certificate, that the party may provide such views to the Holder within such time frame; or ii. if a timeframe for providing such views to the Holder is not specified in the relevant condition of this Certificate, specifies a reasonable period during which the party may submit such views to the Holder;	Section 5 describes when and how a draft of the ACMP was provided to Indigenous groups and Northern Health for review and comment.
	b) undertake a full and impartial consideration of any views and other information provided by a party in accordance with the timelines specified in a notice given pursuant to paragraph (a);	
	c) provide a written explanation to each such party that provided comments in accordance with a notice given pursuant to paragraph (a) as to: i) how the views and information provided by such party to the Holder have been considered and addressed in a revised version of the plan, program or other document; or ii) why such views and information have not been addressed in a revised version of the plan, program or other document;	
	d) maintain a record of consultation with each such party regarding the plan, program or other document; and	
	e) provide a copy of such consultation record to the EAO, the relevant party, or both, promptly upon the written request of the EAO or such party. The copy of such consultation record must be provided to the EAO, relevant party, or both, no later than 15 days after the Holder receives the request for a copy of the consultation record, unless otherwise authorized by the EAO.	

Condition #	Requirement	Location in the Plan
36	**Accidents and Malfunctions Administration and Communication Plan** The Holder must retain one or more Qualified Professionals or Qualified Persons to develop an Accidents and Malfunctions Administration and Communication Plan for the Project. The plan must be developed in consultation with FLNRORD, EMPR, ENV, NHA, and Aboriginal Groups. The plan must include at least the following: a) the means by which the Holder will acquire and maintain contact information for Aboriginal Groups, Tatelkus Indian Reserve 28, other nearby residents, local communities or other users of the area who could be affected by an accident or malfunction;	Section 7.6
	b) the types of accidents and malfunctions requiring notification by the Holder and the timeframe of notifications (including updates subsequent to the initial notification) to those identified in paragraph a);	Section 7.1; Section 2.2 Table 2.2--3
	c) information to be included in the notifications required by paragraph b), including but not limited to: i) information on the accident or malfunction, including types and quantities of substances released, location of releases, duration of releases, and potential impacts caused by the release; ii) any health advisories; iii) remedial action being taken by the Holder including measures to avoid similar occurrences; and iv) details of subsequent monitoring related to the accident of malfunction;	Section 7.3
	d) the manner by which those identified in paragraph a) will be notified by the Holder of an accident or malfunction;	Section 7.4
	e) process for identifying and providing opportunities for those identified in paragraph a) to assist in response to the accident or malfunction;	Section 7.5
	f) identification of any types of accidents and malfunctions that are not addressed in other plans, programs or other documents required by this Certificate or in provincial requirements for the Project, and mitigation measures to address potential adverse effects arising from those accidents or malfunctions; and	Section 2.2, Table 2.2--3

Condition #	Requirement	Location in the Plan
	g) requirements for the Holder to manage the risk of, monitor and report on Project Vehicle-related accidents, including but not limited to identifying i) response measures for fires or explosions involving Project Vehicles; ii) safety measures to be followed by drivers of Project Vehicles; and iii) safety and emergency response equipment to be incorporated into Project Vehicles.	Section 7.7
	The Holder must provide this draft plan that was developed in consultation with EMPR, NHA, ENV, FLNRORD, and Aboriginal Groups to FLNRORD, EMPR, ENV, NHA, Aboriginal Groups and the EAO for review a minimum of 60 days prior to the planned commencement of Construction or as listed in the Document Submission Schedule required by Condition 10 of this Certificate. The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction, Operations, Closure, and Post-Closure, and to the satisfaction of the EAO.	BW Gold is providing this draft of the ACMP to the parties identified in the condition for review and comment. The plan will be submitted to EAO for review a minimum of 60 days prior to the planned commencement of construction.

APPENDIX B CONCORDANCE WITH FEDERAL DECISION STATEMENT (APRIL 15, 2019)

Table B-1: Federal Environmental Assessment Decision Statement Conditions and Location in the Accidents and Malfunctions Administration and Communications Plan

Condition #	Requirement	Location in the Plan
2.14	The Proponent shall publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.11 and 2.13, the offsetting plan(s) referred to in condition 3.11, the compensation plan referred to in condition 8.18 and, if required, condition 5.3, the whitebark pine management plan referred to in condition 8.20, the communication plans referred to in conditions 6.15 and 10.5, the reports related to accidents and malfunctions referred to in conditions 10.4.2 and 10.4.3, the schedules referred to in conditions 11.1 and 11.2, and any update(s) or revision(s) to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 25 years following the end of decommissioning of the Designated Project. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within 48 hours of their publication.	Section 8.1.2
10.1	The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects. The measures taken by the Proponent shall include measures to prevent dam breaches, water treatment plant failures or shutdowns.	Table 2.2-3
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.	This draft of the ACMP is being provided to Indigenous Groups for review and comment.
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;	The accident and malfunction response plan is incorporated into the ACMP, see references below.
	10.3.1 the types of accidents and malfunctions that may cause adverse environmental effects; and	Table 2.2-3
	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.	Table 2.2-3; Section 7

Condition #	Requirement	Location in the Plan
10.4	In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall immediately implement the measures appropriate to the accident or malfunction referred to in condition 10.3.2 and shall:	
	10.4.1 notify, as soon as possible, Indigenous groups and relevant authorities of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction. For the notification to Indigenous groups and the Agency, the Proponent shall specify: 10.4.1.1 the date when and location where the accident or malfunction occurred; 10.4.1.2 a summary description of the accident or malfunction; and 10.4.1.3 any substances potentially released into the environment as a result of the accident or malfunction and the quantities released for each substance, if available.	Section 7
	10.4.2 submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include: 10.4.2.1 a detailed description of the accident or malfunction and of its adverse environmental effects; 10.4.2.2 a description of the measures that were taken by the Proponent to mitigate the adverse environmental effects caused by the accident or malfunction; 10.4.2.3 any view(s) from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures taken by the Proponent to mitigate these adverse environmental effects; 10.4.2.4 a description of any potential residual adverse environmental effects and any modified or additional measures required by the Proponent to mitigate residual adverse environmental effects; and 10.4.2.5 details concerning the implementation of the accident or malfunction response plan referred to in condition 10.3.	Section 8.1.3
	10.4.3 submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) implemented by the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 10.4.2. The report shall include all additional views from Indigenous groups and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 10.4.2.3 were received by the Proponent.	Section 8.1.3

Condition #	Requirement	Location in the Plan
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;	Section 7.1; Section 2.2 Table 2.2-3
	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	Section 7.2, Section 7.4
	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.	Section 7.6, Table 7.6-1, Table 7.6-3, Table 7.6-4
12.1	The Proponent shall maintain all records relevant to the implementation of the conditions set out in this Decision Statement. The Proponent shall retain the records and make them available to the Agency throughout construction and operation and for 25 years following the end of decommissioning of the Designated Project. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.	Section 8.1.2
12.2	The Proponent shall retain all records referred to in condition 12.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.	Section 8.1.4

APPENDIX C OPERATIONAL RISK MANAGEMENT PROCEDURE

BW Gold Ltd. – Blackwater Project			
Department:	Health, Safety & Environment	**Document No.:**	MSP 01
ISO 45001 Section:	6.1 Actions to address risks and opportunities; 8.1.1 Operational Planning and Control; 8.1.2 Hierarchy of Controls	**Effective Date:**	October 2021

MANAGEMENT SYSTEM PROCEDURE

Operational Risk Management

BW GOLD LTD
a subsidiary company of Artemis Gold Inc

Revision:	0	**Replaces:**	
Approved:	*Original signature: refer to Item 6.0 REVIEW AND APPROVAL*		

1.0 PURPOSE

To establish a risk management process that supports the project's business and operating objectives, including its Commitment to Zero Harm.

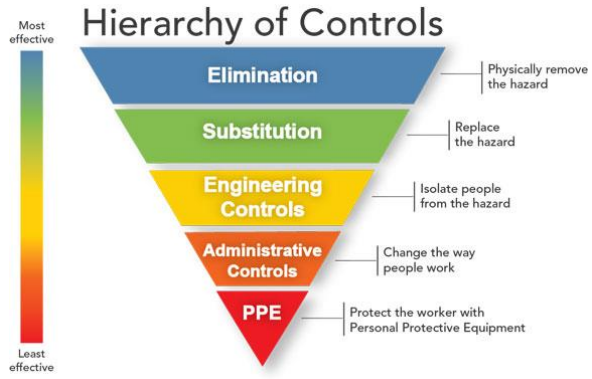
2.0 SCOPE

This procedure covers operational risks associated with the Blackwater Project with consequences related to: a) occupational health; b) safety; c) environment; d) regulatory compliance; e) community support; f) reputation; and g) cost/damage/penalties. The procedure excludes considerations on an enterprise level (e.g., liquidity, cost of capital, political, foreign exchange), which are managed by staff in the corporate office. The requirements of this procedure conform with the requirements of the BC Health, Safety and Reclamation Code (HSRC, April 2021) and ISO 31000 – Risk Management.

3.0 KEY PRINCIPLES

The following key principles are applied in BW Gold's approach to risk management:

- Risks are identified, assessed and managed in an integrated and coordinated manner;
- Risks are documented in a Risk Register to enable the ranking and prioritization of risks for management attention;
- Risks are assigned a risk owner as a single point of accountability;
- Risks are owned at the appropriate level of the organization to enable active management of mitigating controls;
- The acceptable level of risk that will be tolerated is based on the concept of reducing the risk to As Low As Reasonably Practical (ALARP);
- Mitigating controls are based on a multiple barrier approach aimed at both preventing an unwanted event from occurring, and reducing the potential negative impacts should the event occur; and
- The strength of mitigating controls are assessed using the Hierarchy of Controls and applying controls at the top of the hierarchy is required.



4.0 RESPONSIBILITIES

Construction Manager or Designate

a. Ensures the requirements of this procedure are applied and maintained by each Department;

b. Ensures departmental Risk Registers and associated Risk Mitigation Plans are reviewed periodically at a frequency determined by the level of risk (Extreme and Very High Risks – monthly; High Risks – quarterly; Moderate Risks – annually); and

c. Provides resources to maintain all elements of the operational risk management program.

Department Managers or Designates

a. Develop and maintain departmental Risk Registers;

b. Develop, monitor and maintain Risk Mitigation Plans, including the effectiveness of controls;

c. Review the departmental Risk Registers and associated Risk Mitigation Plans periodically at a frequency determined by the level of risk (Extreme and Very High Risks – monthly; High Risks – quarterly; Moderate Risks – annually);

d. Ensure the Risk Register is updated based on incident investigations, management of change reviews, and audits;

e. Ensure that records related to risk management are maintained;

f. Participate in interdepartmental teams to assess and develop controls for complex risks;

g. Actively support departmental staff engaged in conducting task-based and field-level risk assessments; and

h. Ensure that all department employees know: the specific hazards in their work area that can kill or seriously injure, the controls that are in place, their role in maintaining controls, and what to do if the controls are compromised.

Health, Safety and Environment Manager or Designate

a. Provides active support to the Department Managers in understanding and applying this procedure;

b. Reviews site Risk Registers quarterly to verify conformance to this procedure and identify the need for updates;

c. Facilitates the review of the Risk Register by Department Managers; and

d. Supports departmental managers in producing Risk Mitigation Plans.

Supervisors

a. Participate with management in risk assessments associated with developing risk plans and other work planning tools;

b. Ensure good communication of hazards, aspects and controls to employees during training sessions, safety meetings and while conducting daily field level risk assessments;

c. Actively monitor work activity, looking for application of controls (e.g., JHA) and safe work practices (e.g., adherence to SOP);

d. Teach and support workers in the importance of stopping work to reassess risk when conditions or circumstances change; and

e. Provide input into risk assessments as may be requested by their manager.

All Employees (including contractors)

a. Use JHA, NRHTA, and FLRA cards as part of daily work planning to control risks on the job;

b. Participate in safety meetings, training sessions and two-way communication with their supervisors in order to obtain a good understanding about the hazards, aspects and control measures associated with their work;

c. Understand the specific hazards in their work area that can kill or seriously injure, the controls that are in place, their role in maintaining controls, and what to do if the controls are compromised;

d. Stop work when conditions change, so that risks can be reassessed; and

e. Provide input into other risk assessments as may be requested by their supervisor.

Occupational Health and Safety Committee (OHSC)

a. Review risk assessments conducted at the Blackwater Project annually and provide feedback; and

b. Participate in the review of the Risk Register following incident investigations.

Responsibilities of the OHSC are described in the *BC Health Safety and Reclamation Code for Mines – Section 32.*

5.0 PROCEDURE

5.1 PROJECT-WIDE RISK ASSESSMENT (BY DEPARTMENT)

5.1.1 Overview

The key steps in completing risk assessments and mitigation plans are:

i. Prepare a hazard inventory
ii. Identify unwanted events
iii. Complete the risk register (see 5.1.2).
iv. Prioritize risks based on the risk acceptance and action thresholds (see 5.1.3)
v. Develop and implement Risk Mitigation Plans for priority risks (see 5.1.4)

5.1.2 BW Gold – Risk Rating Matrix

Unwanted events are assessed using the following criteria for the likelihood of the unwanted event, and the Risk Rating Matrix in Table 1. The results are recorded in the risk register (*see REC 002: Risk Register*).

Likelihood	Description	Event Frequency
Almost Certain	Event is expected to occur in most circumstances.	At least once per week.
Likely	Event is expected to occur in most circumstances.	At least once per month.
Possible	Event may occur at some time.	Once per year.
Unlikely	Event may occur at some time.	Occurs every 2-5 years.
Rare	Event may occure only in extreme circumstances.	Occurs every 6-30 years

5.1.3 Risk Acceptance and Action Thresholds

The following criteria are to be used for risk acceptance and thresholds for actions.

Risk Rating	Category	Threshold and Response
1 to 5	Low	Below the risk acceptance threshold. Monitor and manage as appropriate.
6 to 12	Moderate	Lies on the risk acceptance threshold. Actively monitor.
13 to 19	High	Exceed the risk acceptance threshold. Proactively manage controls.
20 to 22	Very High	Significantly exceed the risk acceptance threshold. Urgent and immediate attention required to eliminate, avoid or proactively manage critical controls.
23 to 25	Extreme	Urgent and immediate attention required to eliminate or avoid.

5.1.4 Risk Mitigation Plans

A Risk Mitigation Plan must be developed and actively managed for any unwanted event that has been assessed as having a risk rating exceeding the risk acceptance threshold (risk rating > 12; see 5.1.3). A Risk Mitigation Plan template is available (*see REC 011: Risk Mitigation Plan*).

Table 1 – Risk Rating Matrix

	CONSEQUENCES of OCCURRENCE					
	SAFETY	First Aid Injury	Medical Aid Injury	Lost Time Injury	Critical Injury	Fatality
	OCCUPATIONAL HEALTH	Exposure to health hazard resulting in temporary discomfort.	Exposure to health hazard resulting in symptoms requiring medical intervention and full recovery (no lost time).	Exposure to health hazards/ agents (over the OEL) resulting in reversible impact on health (with lost time).	Exposure to health hazards/ agents (significantly over the OEL) resulting in irreversible impact on health with loss of quality of life.	Exposure to health hazards/ agents (significantly over the OEL) resulting in one or more fatalities.
	ENVIRONMENTAL IMPACT	Localized but potentially cumulative; <100 L and no impact to water/wildlife; no non compliance	Significant, localized and reversible; 100L-1000L and no impact to water/ wildlife; non compliance, reportable	Serious, limited and reversible; >1000L and no impact to water/ wildlife; reportable incident with potential legal fines	Serious, extensive and/ reversible; >1000 L and/or impact to water/wildlife; and/or prosecution/ legal fines with potential impact to operations	Catastrophic, extensive and irreversible impact and/or prosecution/legal fines with impact to operations
	COST DAMAGE / PENALTIES	Up to $10,000	$10,000 to $500,000	$500,000 to $2,000,000	$2,000,000 to $10,000,000	>$ 10,000,000
	COMMUNITY SUPPORT / IBA	Isolated Complaints from Individuals	Complaints from Local Landowner groups	Persistent Complaints, Potential Interruptions	Ongoing, Potential for Temporary Loss of Support	Loss of Community Support, Potential IBA Impact
	REPUTATION / MEDIA	Individual Complaints	Localized Complaints or Interest	Local Temporary, Potential Regional Interest	Local Ongoing, Potential for National Interest	Major, Potential for Investment Community Impact
	REGULATORY	Non-compliance noted by Inspector	Reportable Incident monitored by Inspector	Violation of Regulations with possible fine	Legal issue with possible Business Impact	Legal issue; significant Impact on Business; Prosecution
		Level 1	***Level 2***	***Level 3***	***Level 4***	***Level 5***
Likelihood / Probability	***(E) Almost certain***	Moderate (M11)	High (H16)	Very High (VH20)	Extreme (E23)	Extreme (E25)
	(D) Likely	Moderate (M7)	Moderate (M12)	High (H17)	Very High (VH21)	Extreme (E24)
	(C) Possible	Low (L4)	Moderate (M8)	High (H13)	High (H18)	Very High (VH22)
	(B) Unlikely	Low (L2)	Low (L5)	Moderate (M9)	High (H14)	High (H19)
	(A) Rare	Low (L1)	Low (L3)	Moderate (M6)	Moderate (M10)	High (H15)

5.2 POST INCIDENT RISK REGISTER REVIEW

5.2.1 BW Gold applies a risk-based approach when investigating incidents.

5.2.2 The purpose of applying a risk rating when investigating incidents, is to help ensure that priority is given to incidents that have the highest potential risks/consequences.

5.2.3 Where the absence or failure of control is identified by an incident investigation and improvements are made, the Risk Register will be updated to reflect the revised effectiveness of controls.

5.3 NON-ROUTINE HAZARDOUS TASK ANALYSIS (NRHT) FOR NON-ROUTINE HAZARDOUS TASKS

5.3.1 The objective is to develop effective safe work and task expectations, so that all work activity can be undertaken safely and risk is reduced to ALARP.

5.3.2 A formal Non-Routine Hazardous Task Assessment (NRHT) will be required for a job or task that:

i. Is new and the hazards have not yet been evaluated;
ii. Is non-routine;
iii. Does not yet have a standard operating procedure (SOP) in place; or
iv. Has deviated from the work plan.

5.4 FIELD LEVEL RISK ASSESSMENT

5.4.1 The primary objective of FLRA is to have everyone ‘stop and think’ before proceeding with a task so it can be done efficiently and without harm.

5.4.2 At the Blackwater project, field-level risk assessment is conducted using FLRA cards.

5.4.3 Employees are expected to identify, correct, and report on workplace hazards and issues, including those created by at-risk behaviour and/or unsafe conditions.

5.4.4 Field employees are expected to apply the FLRA method to reduce risk to ALARP.

5.4.5 FLRA review is applied:

i. Before workers perform a task;
ii. During the performance of a task when a change or unexpected condition is recognised; and
iii. At the conclusion of the task so that the work area is safe to hand over to others.

If the situation requires further review, a task planning team risk assessment must be conducted.

6.0 REVIEW AND APPROVAL

Name	Title	Date	Signature
Jeremy Langford	Chief Operating Officer (COO), Artemis Gold Inc.		
VACANT	HSE Manager, BW Gold Ltd.		
Review: Operations Leadership Team *Review Schedule*: Every 3 years			

7.0 REVISION HISTORY

Noted below is the revision history of this document.

Revision	Date	Comments
A	October 2021	Initial Issue
0	October 2021	Approved for Use

8.0 DEFINITIONS

Acceptable Risk: Risk that has been reduced to a level that can be tolerated by BW Gold Inc. having regard to its legal obligations, business objectives and HSE policies and commitments.

As Low as Reasonably Practicable (ALARP): The concept of weighting the risk against the cost needed to implement the measures necessary to avoid the risk. In health and safety, it is assumed that measures should be implemented unless it can be shown that the cost is grossly disproportionate to the benefit.

Consequence: The outcome of an unwanted event or situation expressed qualitatively or quantitatively, whether a loss, injury, health or environment impact, or disadvantage, or a benefit, gain or advantage. Often considered in terms of maximum reasonable consequence.

Control: A means to reduce the likelihood of a risk occurring and / or minimise the consequences once an event has occurred.

Control Effectiveness: How well each control measure addresses the cause and/or consequence.

Critical Control: Those controls that significantly influence the likelihood and/or consequence of an event (if removed, they will significantly impact the risk rating).

Environmental Aspect: Element of an organization's activities, products or services that can interact with the environment.

Environmental Impact: Any changes to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.

Event: An incident or situation which occurs in a particular place during a particular interval of time. Events involve releases of or exposure to a hazard. Events can be wanted (opportunity) or unwanted (threat).

Field Level Risk Assessment (FLRA): A method that individuals and crews use to minimize or eliminate potential losses (to people, property, materials and the environment) on the day of the job.

Hazard: A potential source of harm.

Note: It may be source of potential harm to people, facilities, the environment or the community typically in the potential release or exposure to energy such as electricity, pressure, chemical, mechanical, gravity, etc. A hazard must be recognised and understood in order to manage the related risk. Understanding a hazard includes the nature, magnitude, and potential consequences as well as relevant "target" or impact characteristics, potential timeframes, pathways or mechanisms of its manifestation and residual harm. The environmental term, "aspect", is synonymous with hazard; however, it is noted that interactions with the environment are often planned, assessed and approved versus being unwanted and unplanned events e.g., land disturbance, discharge of contaminants.

Hazard Identification: The process for recognizing that a hazard exists and defining its characteristics. The systematic identification of a source or situation with a potential for harm to people or the environment, damage to property, loss of process, or a combination of these.

Hierarchy of Control: Approach used to assess the strength of control measures being implemented. Personnel are encouraged to apply controls at the top of the hierarchy.

Likelihood: The probability or chance that an unwanted event will occur.

Material Unwanted Event (MUEs): Events where the maximum reasonable consequence associated with the event is rated as Extreme (e.g., safety consequence: one or more fatalities) or Very High (e.g., safety consequence: critical or permanently disabiling injury).

Occupational Exposure Limit (OEL): is that concentration or level of a stressor (e.g., noise, airborne contaminants) to which nearly all workers may be repeatedly exposed day after day without adverse health effects or experience undue discomfort. OELs are not fine dividing lines between safe and unsafe practice and a continuous effort should be made to reduce hazard exposures to levels that are "as low as reasonably practicable" (ALARP).

Preventive Controls: Measure designed to reduce the likelihood of the risk occurring.

Risk: A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of the consequence (e.g., injury, illness, environmental impact) that may be caused by the event or exposure.

Risk Register: A record of the identified priority events that is ranked according to the degree of associated risk, as well as the critical controls and relevant risk and control owners.

Risk Analysis: A systematic process to understand the nature and evaluate the level of risk.

Risk Assessment: A process of evaluating the risks arising from hazards taking into account the adequacy of any existing controls ("risk analysis") and deciding whether or not the risks are acceptable, when compared to acceptable risk criteria or goals.

Risk Management: Interactive process of identifying, assessing and mitigating risks as

part of the management of a project or activity.

Risk Mitigation Plan: A document that describes risks and current controls associated with an unwanted event as well as specific actions, responsible persons and completion milestones to improve existing controls or introduce new controls to reduce the risk to acceptable levels.

Site-Wide (Baseline) Risk Assessment: An overarching risk assessment that establishes a 'starting point' for operational risk management. It is used to identify and prioritise relevant risks, hazards and associated unwanted events and document applicable controls.

Unwanted Event: A description of a situation where the hazard has or could possibly be released in an unplanned way, including a description of the consequences.

9.0 REFERENCES AND RELATED DOCUMENTS

- BC Occupational Health and Safety Act and Regulations
- BW Gold Inc. Health and Safety Policy
- BC Health Safety and Reclamation Code for Mines: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_apr2021.pdf
- REC 002: Risk Register
- REC 011: Risk Mitigation Plan template

APPENDIX D ACCIDENTS AND MALFUNCTIONS CALL-OUT SHEET

Call-out sheet provided separately.