



# Blackwater Mine



## Independent Environmental Monitor – Terms of Engagement



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# Work Instructions

## IEM Terms of Engagement

<b>Version</b>	B.1
<b>Replaces</b>	A.6
<b>Date</b>	September 2024

## Context

The Blackwater Gold Project (Project) received Environmental Assessment Certificate #M19-01 (EAC) on June 21, 2019, under the 2002 Environmental Assessment Act and a Decision Statement on April 15, 2019, under the Canadian Environmental Assessment Act, 2012, approving the Project with conditions. Blackwater is an open pit gold and silver mine with associated ore processing facilities located 110 kilometres southwest of Vanderhoof in central British Columbia.

The Independent Environmental Monitor – Terms of Engagement (IEM – TOE) is required by Condition 12 of the EAC and Condition 9 of the Federal Decision Statement (DS). Concordance tables identifying requirements in the EAC and DS conditions are provided below.

**Concordance with EAC-M19 Schedule B Conditions**

Requirement	Location in ToE
c) Define the role, responsibilities and qualifications of the IEM(s).	Section 4: The Role, Responsibilities, of the IEM(s) Section 5: IEM and IEM Support Staff Qualifications.
d) Define and outline the roles, responsibilities and qualifications of any staff or other persons that will assist the IEM(s) with performing the IEM's roles and responsibilities (each an "IEM(s) Support").	Section 4: The Role, Responsibilities, of the IEM(s) Section 5: IEM and IEM Support Staff Qualifications.
e) Describe the nature and frequency of monitoring.	Section 6: Nature and Frequency of Monitoring, Access to Site for IEM.
f) Define the process whereby the IEM(s) or an IEM(s) Support will make recommendations to the Holder to take mitigative or corrective actions to address any non-compliance or potential non-compliance with this Certificate.	Section 9: IEM Structure and Approach
g) Define the process by which the recommendations in section f) above will be communicated to the EAO, the Aboriginal Groups, and the Holder.	Section 9: IEM Structure and Approach Section 10.2: Project Phase Completion Report
h) Define the situations in which the IEM(s) will have the authority from the Holder to stop work on part or all of the Project if the IEM(s) determines that: I. The Holder has not, or may have not, complied fully with the requirements of this Certificate; and II. Stopping work is necessary to prevent or reduce Project-related adverse effects as determined by the IEM(s) or any IEM(s) support.	Section 10: Environmental Incident Review and Reporting
i) Describe the process whereby the Holder, in consultation with Aboriginal Groups, EMPR, ENV, and FLNRORD may review the approved IEM(s) terms of engagement and submit a revised IEM(s) terms of engagement to the EAO for approval.	Section 14: Plan Revision
j) Describe the provision of access to the Project Site so the IEM(s) can perform its duties, and the process by which that access will be provided.	Section 6: Nature and Frequency of Monitoring, Access to Site for IEM
k) Defining a process and protocols for inviting the Aboriginal Group monitors required by Condition 17 (Aboriginal Group Monitor and Monitoring Plan) in site inspections, including identification of circumstances under which those opportunities may be limited (if any) and how, in those cases, information will be provided to Aboriginal Group monitors following those inspections.	Section 6: Nature and Frequency of Monitoring, Access to Site for IEM Section 9: IEM Structure and Approach Section 11: Process and Protocols for Inviting Aboriginal Group Monitors (Required by EAC Condition 17) on Site Inspections.
l) Outline the details of a Project phase completion report to be submitted to the EAO and Aboriginal Groups upon completion of each of Construction, Operations, Closure and Post-Closure phases. The reports must be written by the IEM(s) and include, but is not necessarily limited to: I. a record of all non-compliances with this Certificate; II. a record of the recommendations made by the IEM(s) to the Holder to prevent or address any non-compliance with this Certificate; III. a record of whether and how any such recommendations from the IEM(s) were implemented and the corresponding outcome of implementation; IV. a record of all stop work orders issued to prevent or address a non-compliance with this Certificate and any Provincial or Federal legislation or authorization applicable to the Project; V. assessment of the effectiveness of the mitigation measures for Construction, Operations, Closure and Post-Closure; and I. Recommendations on how to achieve and maintain compliance with the conditions of this Certificate for the next Project phase.	Section 10.2: Project Phase Completion Reporting.
m) A requirement that a detailed work plan for each phase of the Project be submitted to the EAO for approval prior to the start of the relevant Project phase. The work plans must describe the frequency of inspections and rationale, the manner in which IEM(s) identified non-compliances will be communicated to the EAO, Aboriginal Groups, and the Holder, and the format and frequency of IEM(s) reports.	Section 8 Detailed Work Plans



**Concordance with Federal DS Conditions**

Requirement	Location in ToE
<p>9.1 The Proponent shall retain, prior to construction, the services of an independent environmental monitor, who is a qualified individual as it pertains to environmental monitoring of mining projects in British Columbia, and is also a Qualified Professional, where such a qualification exists, to observe, record, and report on the implementation of the conditions set out in this Decision Statement during all phases of the Designated Project.</p>	<p>Section 5: IEM and IEM Support Staff Qualifications. Section 9.2: IEM Communications and Reporting Section 10: Environmental Incident Review and Reporting</p>
<p>9.2 As part of the reporting requirement pursuant to condition 9.1, the independent environmental monitor shall advise the Proponent, the Agency and Indigenous groups if, in their view, the activities do not comply with the conditions set out in this Decision Statement. The independent environmental monitor shall also advise the Proponent, the Agency and Indigenous groups whether measures should be taken in respect to these activities.</p>	<p>Section 9.2: IEM Communications and Reporting Section 10: Environmental Incident Review and Reporting</p>
<p>9.3 The Proponent shall require the independent environmental monitor to prepare reports at a frequency determined in consultation with the Agency and relevant authorities that include:</p> <ul style="list-style-type: none"> <li>■ 9.3.1 a description, including through photo evidence, of the Designated Project activities that occurred and the mitigation measures that were applied during the period covered by the report; and</li> <li>■ 9.3.2 a description, including through photo evidence, of occurrence(s) of non-compliance related to the implementation of conditions set out in this this Decision Statement observed during the period covered by the report, including: <ul style="list-style-type: none"> <li>○ 9.3.2.1 the date of the occurrence(s) of non-compliance;</li> <li>○ 9.3.2.2 whether Designated Project activities were changes or stopped as a result of the occurrence(s) of non-compliance;</li> <li>○ 9.3.2.3 how the occurrence(s) of non-compliance was or were corrected by the Proponent and the date that the corrective action(s) was or were completed by the Proponent; and,</li> <li>○ 9.3.2.4 if any, the status of pending occurrences of non-compliance that have not been corrected yet by the Proponent and a description of any adverse environmental effects associated with the occurrences of non-compliance.</li> </ul> </li> </ul>	<p>Section 9.2: IEM Communications and Reporting Section 10: Environmental Incident Review and Reporting</p>
<p>9.4 The Proponent shall require the independent environmental monitor to provide the reports referred to in condition 9.3 to the Agency, Indigenous groups and relevant federal authorities within 10 days of their production. The Proponent shall require the independent environmental monitor to retain the reports referred to in condition 9.3 until the end of decommissioning.</p>	<p>Section 9.2: IEM Communications and Reporting Section 10: Environmental Incident Review and Reporting</p>
<p>9.5 The Proponent shall require the independent environmental monitor to report all occurrence(s) of non-compliance observed by the independent environmental monitor directly to the Agency, Indigenous groups and relevant federal authorities within 48 hours of the observation of occurrence(s) of non-compliance.</p>	<p>Section 9.2: IEM Communications and Reporting Section 10: Environmental Incident Review and Reporting</p>
<p>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.</p>	<p>Section 13: Record Keeping.</p>
<p>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.</p>	<p>Section 13: Record Keeping.</p>

## Acronyms and Abbreviations

Aboriginal Groups	Ulkatcho First Nation, Lhoosk'uz Dené Nation, Nadleh Whut'en First Nation, Stelat'en First Nation, Saik'uz First Nation, and Nazko First Nation (as defined in Environmental Assessment Certificate M#19-01)
Artemis	Artemis Gold Inc.
BC	British Columbia
Blackwater or Project	Blackwater Project or Blackwater Gold Project
BW Gold	BW Gold LTD.
CCME	Canadian Council of Ministers of the Environment
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
CM	Construction Manager
COO	Chief Operating Officer
CPESC	Certified Professional in Erosion and Sediment Control
Designated Project	Means the Blackwater Gold Project as described in section 2 of the environmental assessment report prepared by the Canadian Environmental Assessment Agency (Canadian Environmental Assessment Registry Reference Number 80017, Document Number 27; as defined by the Project's federal Decision Statement).
DS	Decision Statement
DFO	Fisheries and Oceans Canada
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EC	Environment Canada
ECCC	Environment and Climate Change Canada
EHS	Environmental Health and Safety
ELoMC	Environmental Life of Mine Committee
EM	Environmental Manager
EMC	Environmental Monitoring Committee
EMLI	Ministry of Energy, Mines and Low Carbon Innovation
EMPR	Ministry of Energy, Mines, and Petroleum Resources.
EMS	Environmental Management System



ENV	Ministry of Environment and Climate Change Strategy
EPCM	Engineering, Procurement and Construction Management
FLNRORD	Ministry of Forests, Lands, Natural Resource Operations, and Rural Development
FWR	Freshwater Reservoir
HC	Health Canada
IAAC	Impact Assessment Agency of Canada (formerly Canadian Environmental Assessment Agency (CEAA))
IEM	Independent Environmental Monitor
IEM – TOE	Independent Environmental Monitor – Terms of Engagement
Indigenous Groups	Lhoosk'uz Dené Nation, Ulkatcho First Nation, Nadleh Whut'en First Nation, Saik'uz First Nation, Stelat'en First Nation, Nazko First Nation, Skin Tyee Nation, T̓silhqot'in Nation, Métis Nation British Columbia, and Nee-Tahi-Buhn Band (as defined in the federal Decision Statement)
IPMP	Invasive Plants Management Plan
IR	Information Request
LDN	Lhoosk'uz Dené Nation
LGO	Low Grade Ore
MDMER	Metal and Diamond Mining Effluent Regulations
MELP	Ministry of Environment, Lands and Parks
MEM	Ministry of Energy and Mines
MERP	Mine Emergency Response Plan
ML/ARD	Metal Leaching and Acid Rock Drainage
MOE	Ministry of Environment
MOF	Ministry of Forests
MOFR	Ministry of Forests and Range
MOTI	Ministry of Transportation and Infrastructure
MP	Management Plan
MSDP	Mine Site Water and Discharge Monitoring and Management Plan
MWLAP	Ministry of Water, Land and Air Protection
New Gold	New Gold Inc.
NFN	Nazko First Nation
NWFN	Nadleh Whut'en First Nation
Project	Blackwater Gold Project
QA/QC	Quality assurance/Quality control
SEPSCP	Surface Erosion Prevention and Sediment Control Plan

SFN	Saik'uz First Nation
SMP	Soil Management Plan
SOPs	Standard Operating Procedures
StFN	Stellat'en First Nation
the Code	Health, Safety and Reclamation Code for Mines in British Columbia
TSF	Tailings storage facility
UFN	Ulkatcho First Nation
VEC	Valued Ecosystem Component
VMP	Vegetation Monitoring Plan
SVP	Senior Vice President
WMMP	Wildlife Mitigation and Monitoring Plan
WMP	Water Management Pond
WRMP	Waste and Refuse Management Plan

# 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 124.5. 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. 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), Uikatcho First Nation (UFN), Skin Tye 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 Stelat'en First Nation (StFN; collectively, the Nechako First Nations (NFNs)) as well as the traditional territories of the Nazko First Nation (NFN), Nee Tahi Buhn Band, Cheslatta Carrier Nation, and Yekooche First Nation (EAO 2019a).

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 20,000 Mtpa in Year 11 until the end of the 23-year mine life. The Closure phase is 24 years 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 EAC #M19-01 on June 21, 2019, under the 2002 *Environmental Assessment Act* (EAO 2019b) and a Decision Statement (DS) on April 15, 2019, under the *Canadian Environmental Assessment Act, 2012* (CEA Agency 2019b). 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 Project 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 2-1 but who will provide supporting roles include independent environmental monitors, an Engineer of Record (EOR) for each tailings storage facility and dam, an Independent Tailings Review Board (ITRB), TSF qualified person, geochemistry qualified professional, and other qualified persons and qualified professionals.

**Table 2-1: BW Gold Roles and Responsibilities**

Role	Responsibility
Chief Executive Officer (CEO)	The CEO is responsible for overall Project governance. Reports to the Board.
Chief Operating Officer (COO)	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 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 and Rigorous Project Management and Financial Discipline. Reports to COO.
Mine Manager	The Mine Manager, as defined in the <i>Mines Act</i> , 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, updating EMS and MPs. The EM or designate will be responsible for reporting non-compliance to the CM, and Engineering, Procurement and Construction Management (EPCM) contractor, other contractors, the Company and regulatory agencies, where required. 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.

Role	Responsibility
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 VP Environment & Social Responsibility.
Community Relations Advisor	Community Relations Advisor is responsible for managing the Community Liaison Committee and Community Feedback Mechanism. Reports to Indigenous Relations Manager.
Independent Environmental Monitor (IEM)	To inspect project activities to verify whether the project is developed in accordance with regulatory requirements (EAC, associated management plans (MPs) and Federal CEEA DS). The IEM acts as an independent and neutral observer reporting back to EAO, IAAC, BW Gold and Aboriginal Groups.
Environmental Monitors	Environmental Monitors (includes Environmental Specialists and Technicians) are responsible for tracking and reporting on environmental permit obligations through field-based monitoring programs. Report to EM.
Aboriginal Monitors (AM)	Aboriginal 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. Report to EM.
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 and qualified persons will be retained to review objectives and conduct various aspects of environmental and social monitoring as specified in EMPs and social MPs.

BW Gold will employ a qualified person as an EM who will ensure that 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, BW Gold will be entering into multiple EPCM contracts, likely for the Transmission Line, Process Plant, Tailings and Reclaim System, and 25kV Power Distribution. Each engineer/contractor will have their own CM and there will be a BW Gold responsible PM and/or Superintendent who ultimately reports to the GM Development. Some of the scope, such as the TSF and Water Management Structures will be self-performed by BW Gold, likely using hired equipment. Other smaller scope packages may be in the form of EPCM contracts. The EPCM contractors will report to the CMs who will ultimately 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 EMPs 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 requirements. The Mine Manager will have overall responsibility for Closure and Post-closure activities at the mine site.

Pursuant to Condition 19 of the Project's EAC #M19-01, BW Gold has established an Environmental Life of Mine Committee (ELoMC, previously the 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 Climate Change Strategy, and Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLRNORD).

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 Aboriginal 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 the Aboriginal Group's Aboriginal interests.

### **3 Purpose and Objectives**

The purpose of the IEM – TOE is to define and outline processes for the following from EAC Conditions:

- c) Define the role, responsibilities and qualifications of the IEM(s);

- d) Define and outline the roles, responsibilities, and qualifications of any staff or other persons that will assist the IEM(s) with performing the IEM's roles and responsibilities (each an "IEM(s) Support");
- e) Describe the nature and frequency of monitoring;
- f) Define the process whereby the IEM(s) or an IEM(s) Support will make recommendations to the Holder to take mitigative or corrective actions to address any non-compliance or potential non-compliance with this Certificate;
- g) Define the process by which the recommendations in section f) above will be communicated to the EAO, the Aboriginal Groups, and the Holder;
- h) Define the situations in which the IEM(s) will have the authority from the Holder to stop work on part or all of the Project if the IEM(s) determines that:
  - I. The Holder has not, or may have not, complied fully with the requirements of this Certificate; and,
  - II. Stopping work is necessary to prevent or reduce Project-related adverse effects as determined by the IEM(s) or any IEM(s) support.
- i) Describe the process whereby the Holder, in consultation with Aboriginal Groups, EMPR, ENV, and FLNRORD may review the approved IEM(s) terms of engagement and submit a revised IEM(s) terms of engagement to the EAO for approval;
- j) Describe the provision of access to the Project Site so the IEM(s) can perform its duties, and the process by which that access will be provided;
- k) Defining a process and protocols for inviting the Aboriginal Group monitors required by Condition 17 (Aboriginal Group Monitor and Monitoring Plan) in site inspections, including identification of circumstances under which those opportunities may be limited (if any) and how, in those cases, information will be provided to Aboriginal Group monitors following those inspections;
- l) Outline the details of a Project phase completion report to be submitted to the EAO and Aboriginal Groups upon completion of each of Construction, Operations, Closure, and Post-Closure phases. The reports must be written by the IEM(s) and include, but is not necessarily limited to:
  - I. a record of all non-compliances with this Certificate;
  - II. a record of the recommendations made by the IEM(s) to the Holder to prevent or address any non-compliance with this Certificate;
  - III. a record of whether and how any such recommendations from the IEM(s) were implemented and the corresponding outcome of implementation;
  - IV. a record of all stop work orders issued to prevent or address a non-compliance with this Certificate and any Provincial or Federal legislation or authorization applicable to the Project;
  - V. assessment of the effectiveness of the mitigation measures for Construction,



Operations, Closure and Post-Closure; and

- VI. Recommendations on how to achieve and maintain compliance with the conditions of this Certificate for the next Project phase.
- m) A requirement that a detailed work plan for each phase of the Project be submitted to the EAO for approval prior to the start of the relevant Project phase. The work plans must describe the frequency of inspections and rationale, the manner in which IEM(s) identified non-compliances will be communicated to the EAO, Aboriginal Groups, and the Holder, and the format and frequency of IEM(s)' reports.

The purpose of the Independent Environmental Monitor – Terms of Engagement plan is also to define and outline processes for the following from Federal DS Conditions:

- 9.1 The Proponent shall retain, prior to construction, the services of an independent environmental monitor, who is a qualified individual as it pertains to environmental monitoring of mining projects in British Columbia, and is also a Qualified Professional, where such a qualification exists, to observe, record, and report on the implementation of the conditions set out in this Decision Statement during all phases of the Designated Project.
- 9.2 As part of the reporting requirement pursuant to condition 9.1, the independent environmental monitor shall advise the Proponent, the Agency and Indigenous groups if, in their view, the activities do not comply with the conditions set out in this Decision Statement. The independent environmental monitor shall also advise the Proponent, the Agency and Indigenous groups whether measures should be taken in respect to these activities.
- 9.3 The Proponent shall require the independent environmental monitor to prepare reports at a frequency determined in consultation with the Agency and relevant authorities that include:
- a description, including through photo evidence, of the Designated Project activities that occurred and the mitigation measures that were applied during the period covered by the report; and
  - a description, including through photo evidence, of occurrence(s) of non-compliance related to the implementation of conditions set out in this Decision Statement observed during the period covered by the report, including:
    - 9.3.2.1 The date of the occurrence(s) of non-compliance;
    - 9.3.2.2 Whether Designated Project activities were changed or stopped as a result of the occurrence(s) of non-compliance;
    - 9.3.2.3 How the occurrence(s) of non-compliance was or were corrected by the Proponent and the date that the corrective action(s) was or were completed by the Proponent; and
    - 9.3.2.4 if any, the status of pending occurrences of non-compliance that have not been corrected yet by the Proponent and a description of any adverse environmental effects associated with the occurrences of non-compliance.
- 9.4 The Proponent shall require the independent environmental monitor to provide the

reports referred to in condition 9.3 to the Agency, Indigenous groups and relevant federal authorities within 10 days of their production. The Proponent shall require the independent environmental monitor to retain the reports referred to in condition 9.3 until the end of decommissioning.

- 9.5 The Proponent shall require the independent environmental monitor to report all occurrence(s) of non-compliance observed by the independent environmental monitor directly to the Agency, Indigenous groups and relevant federal authorities within 48 hours of the observation of occurrence(s) of non-compliance.
- 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.
- 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.
- 12.3 The Proponent shall notify the Agency of change(s) to the contact information of the Proponent included in the Decision Statement.

### 3.1 Objectives

The objectives of this IEM –TOE is to:

- Provide clear procedures and measures to operationalize the IEM requirements from both the Federal Decision Statement and the Provincial EAC to manage construction-related environmental impacts and implement mitigations from applicable Environmental Management Plans;
- Identify key roles and responsibilities associated with environmental management; and
- Establish communication protocols to ensure information is shared with stakeholders and government agencies promptly and as required by relevant authorizations.

### 3.2 Scope

The scope of this IEM – TOE includes all Project activities included in EAC M19-01 and the Federal DS Conditions.

## 4 Role and Responsibilities of the IEM(s)

The role and responsibilities of the IEM are:

- To inspect construction related activities to verify whether the project is developed in accordance with regulatory requirements (EAC, associated management plans (MPs) and Federal DS).
- The IEM acts as an independent and neutral observer while inspecting, and documenting project activities, through information requests directly to BW Gold and summarizing compliance and non-compliances Certificate holder/proponent as per the steps outlined in Figure 9-1
- The IEM is expected to communicate directly with EAO compliance and enforcement (C&E), IAAC C&E, Indigenous Groups and BW Gold.
- The IEM will report observations back to Indigenous Groups and the EAO C&E, IAAC C&E and the BW Gold at the same time. The IEM recognizes the importance of effective communications with all parties involved in the Project to facilitate a culture of open dialogue and proactive environmental best practice.
- While required to communicate matters of non-compliance as per Table 10-1 to the appropriate regulatory agencies and Indigenous Groups within 48 hours as per the Federal DS, any matter requiring immediate attention where a delay in reporting may cause additional environmental impacts, will be identified to the Proponent's team as soon as feasible, and summarized to the broader group within 48 hours as required.
- The IEM team will develop an in-depth understanding of the Certified Project Description, Schedule B Table of Commitments, Federal DS, EMS, and associated MPs, and proposed construction practices. The IEM will develop a comprehensive checklist system to direct observation activities and identify potential matters of non-compliance. The preliminary list (including but not limited to) of MPs under the IEMs review are:
  - Accidents and Malfunctions Administration and Communication Plan;
  - Aquatic Effects Management Plan
  - Air Quality and Dust Management Plan;
  - Archaeological Management and Impact Mitigation Plan;
  - Caribou Mitigation and Monitoring Plan;
  - Chemicals and Materials Storage, Transfer, and Handling Plan;
  - Construction Environmental Management Plan (CEMP);
  - Country Foods Monitoring Program ;
  - Country Foods and Socio-economic Conditions Follow-up Program ;
  - Cultural and Spiritual Resources Management Plan;
  - Cyanide Management Plan;
  - End Land Use Plan
  - Federal Fisheries Follow-up Programs
  - Fuel Management and Spill Control Plan;
  - Invasive Plant Management Plan;
  - Mine Water and Discharge Management Plan;
  - Metal Leaching/Acid Rock Drainage Management Plan;
  - Mine Emergency Response Plan;
  - Mine Site Traffic Control Plan;
  - Mine Site Water Management Plan;
  - Noise and Vibration Effects Monitoring Plan;
  - Soil Management Plan;

- Surface Erosion Prevention and Sediment Control Plan (SEPSCP);
  - Tenure Holder Communication and Mitigation Plan;
  - Vegetation Management Plan;
  - Waste (Refuse and Emissions) Management Plan;
  - Wetland Management and Offsetting Plan;
  - Whitebark Pine Management Plan
  - Wildlife Mitigation and Monitoring Plan
- BW Gold will work with the IEM to provide additional management plans needed to support inspections, as requested by the IEM.
  - The IEM will report applicable Environmental Incidents as per Table 10-1 and using the contact information in Appendix C within 24 hours upon direct observation by the IEM team. Incidents observed/documentated by any contractor should be reported to BW Gold, who will then provide to the appropriate regulatory agencies, Indigenous Groups and the IEM team as required.
  - The IEM will review all incident reports provided by the Certificate holder/proponent or contractors, in a timely manner, providing advice as required to the Regulators or other parties as deemed necessary. Environmental Incidents, and potential recommendations, will be summarized in regular IEM reports.

## 5 IEM and IEM Support Staff Qualifications

The IEM role is required to be filled by Qualified Professional(s), unless otherwise approved by the EAO, with a minimum of five years' experience in monitoring construction and environmental mitigation for major mining projects in BC.

Other persons may assist the IEM with determining compliance with the EAC, however, any findings and/or data reported must be verified and approved by the IEM prior to reporting or actions being undertaken.

The IEM support team will provide field support, expertise pertaining to communication practices, regulatory advice and or direction related to technical matters relevant to the Certificate and DS conditions, management plan commitments, and aboriginal interests. IEM support team qualifications include having membership in a professional organization bound to a code of ethics and having relevant experience. Any member of the IEM support team that is engaged to provide expertise, but is not necessarily part of a professional organization, will have oversight by a professional in good standing. For example, site compliance concerns related to sediment erosion control would be verified by a QP who is a Certified Professional in Erosion and Sediment Control (CPESC), or equivalent.

Initial EAO approval of the IEM ToE and IEMs occurred prior to construction via letter on August 31, 2022.

BW Gold in consultation with Aboriginal Groups, have engaged EDI Environmental Dynamics Inc. (EDI) as the IEM team. EDI will provide a Lead IEM and IEM support team for the duration of construction, operations and closure and post-closure phases. Lead IEMs are Leslie Chamberlist, PAg, CPESC, and Graeme Paterson, PAg, CPESC. The Lead IEMs are well

versed in the IEM role and implementing the IEM program specific to the EAC and DS conditions, understand expectations of EAO/IAAC, and will provide opportunity for Aboriginal Group Monitor involvement.

## **6 Nature and Frequency of Monitoring and Access to Site for IEM**

Monitoring will be scheduled in accordance with the project schedule outlined in Section 7. The IEM will work with BW Gold and Aboriginal Groups through monthly planning meetings (to be scheduled) to determine which project execution activities present the greatest level of risks to valued ecosystem components (VEC) and sensitive environmental features on the project site and confirm visit dates and IEM participants. It is anticipated that the frequency, length, and nature of visits will vary throughout the different phases of the project, however, BW Gold anticipates that the IEM will be on site for once per month (on average), efforts will be made to align with EAC/Federal DS compliance inspections where feasible, and likely no more than 16 visits per year (for budgetary constraint purposes).

Site visit duration will vary but is likely to be completed in 1-3 days depending on the level of site activity, timing of specific construction and location of construction. The IEM and support staff will use their own vehicle to access project areas for inspections.

The nature of the inspections is likely to consist of:

- Pre-schedule visits (e.g. dates and times) with BW Gold to facilitate involvement of Aboriginal Group Monitors (where possible and available).
- Advising BW Gold and the onsite Aboriginal Group Monitors of their intent to visit site to complete an inspection a minimum of 48 hours before the inspection is to occur (where possible). BW Gold will respond to the request at their earliest opportunity and no later than 24 h after the request for a visit is made. The IEM will be provided unimpeded access to all project areas as outlined in the Certified Project Description.
- Undergoing site orientation by BW Gold during their initial visit to site.
- Complete a desktop review prior to on-site verification visits to be informed of status of project activities to make best use of time on site. This review is to be based on responses to information requests (IRs) and environmental incidents provided by BW Gold.
- On-site field inspections including photo documentation and note taking to develop inspection summary reports.
- On-site interviews with relevant project staff where additional information is required beyond field observation to determine compliance with EAC/Federal DS conditions and MP commitments.

Should the project enter a temporary suspension or care and maintenance period for any reason, IEM monitoring will continue to review compliance with EAC and DS conditions, however, the frequency of visits may be reduced depending on the potential risks present at site during that time. A workplan will be prepared outlining the anticipated changes in IEM inspection frequency and reporting and communication linkages.

## 7 Anticipated Project Schedule

Per EAC condition 12 BW Gold is required to retain the IEM through all phases of the mine, including:

- Construction (including Early Works) (Year -2 to Year -1);
- Operation (Year +1 to Year +23, Table 7-1);
- Closure (Year +24 to ~Year +45); and
- Post-closure (~Year 46+).

An anticipated construction and operations schedule is presented in Table 7-1. Initial construction activities extend through 18 to -24 months. Operation is anticipated by H2 2024.

Operations is expected to include two ramp up phases between Year +6 and Year +10, and another between Year +11 and Year +18. As indicated in Table 7-1, there are discrete construction activities associated with both production ramp ups.

The Closure phase is anticipated to occur between Year +24 to approximately Year +45, ending when the Open Pit has filled, and the Post-closure phase will extend beyond Year +46.

**Table 7-1: Summary of Conceptual Mine Activities during Construction and Operations**

Year	Activities Proposed as Approved
Early Works	<ul style="list-style-type: none"> <li>■ Clear, grub and construct mine site roads.</li> <li>■ Clear mine access borrow area and Southern Site C borrow area.</li> <li>■ Clear TSF Site C starter dam footprint and borrow and preparation area.</li> <li>■ Clear Freshwater Reservoir (FWR) footprint.</li> <li>■ Clear the Low Grade Ore (LGO) Stockpile footprint.</li> <li>■ Clear Open Pit (20.6 ha of new disturbance).</li> <li>■ Clear Upper Waste Stockpile site.</li> <li>■ Clear explosives storage, truck shop, operations camp, and ready line and bulk fuel storage.</li> <li>■ Clear, grub and construct plant site pad.</li> </ul>
Year -2 & Year -1	<ul style="list-style-type: none"> <li>■ Clear and grub the footprints of all major mine components (pit, roads, stockpile base, TSF C starter dam, FWR, process plant, crushers).</li> <li>■ Prepare for and commence infrastructure construction.</li> <li>■ Strip sites for the waste and topsoil stockpiles.</li> <li>■ Construct water diversion, Water Management Pond (WMP), and management structures.</li> <li>■ Main Dam C – Excavation of cut-off-trench and initial fill placement (Year -2) followed by Main Dam C Stage 1 construction to 1,273 meters above sea level (masl)</li> <li>■ TSF C Pond – Starter pond initiation at the diversion berm</li> <li>■ Construct mine site roads and haul road from the pit to the stockpiles, crusher, and tailings dam.</li> <li>■ Establish construction camp, operations camp, and services.</li> <li>■ Establish explosives storage facility.</li> <li>■ Excavate construction borrow pit mined down to 1,510 masl bench and starter pit down to 1,610 masl bench.</li> <li>■ Deliver construction rock to the process area for use in the conveyor pads.</li> <li>■ Stockpile Low Grade Ore beginning in Year -1 on the ROM pad for use in mill commissioning.</li> <li>■ Construct the Metals Water Treatment Plant (WTP).</li> <li>■ Construct processing plant infrastructure - foundations, buildings, services.</li> <li>■ Construct the transmission line, mine site substation, and electrical distribution system.</li> </ul>

	<ul style="list-style-type: none"> <li>■ Energize site with electrical power from grid connection.</li> <li>■ Install site security, communications, first aid and emergency response facilities.</li> <li>■ Decommissioning of Exploration Access Road</li> </ul>
Year +1	<ul style="list-style-type: none"> <li>■ Continued development of Construction Borrow pits and Starter Pit;</li> <li>■ Commissioning of processing facilities with stockpiled ore;</li> <li>■ Raise of Main Dam C, development of downstream step-out, and continued filling of the TSF C Pond;</li> <li>■ Expansion and development of additional lift for the Lower Waste Stockpile;</li> <li>■ Expansion and development of additional lifts for the LGO Stockpile; and,</li> <li>■ Commissioning of airstrip, airstrip access road and support facilities</li> </ul>
Year +2	<ul style="list-style-type: none"> <li>■ Completed extraction from the Construction Borrow pits;</li> <li>■ Continued extraction from the Starter Pit, and initiation of the East Pushback 1;</li> <li>■ Processing Plant facilities operational for the first full year;</li> <li>■ Raise of Main Dam C to 1,295 masl and continued filling of the TSF C Pond to 1,269 masl;</li> <li>■ Expansion and development of additional lift of Lower Waste Stockpile; and</li> <li>■ Expansion and development of additional lifts for LGO Stockpile.</li> </ul>
Year +3 to Year +5	<ul style="list-style-type: none"> <li>■ Starter pits mined to pit bottom on 1,450 masl bench (Year +3).</li> <li>■ East Pushback 1 pit mined to pit bottom on 1,460 masl bench (Year +4).</li> <li>■ East Pushback 2 pit mined to 1,460 masl bench (Year +5).</li> <li>■ West Pushback pit mined to 1,540 masl bench (Year +5).</li> <li>■ Processing plant continues to operate at a throughput of 5.5 Mtpa until Year +5.</li> <li>■ Continued Open Pit extraction with diesel drill, blast and shovel with addition of electric drill and shovel in Year +5.</li> <li>■ Main Dam C raised to 1,312 masl (Year +5).</li> <li>■ The TSF C Pond filled to 1,276 masl during Year +3.</li> <li>■ Main Dam D construction to 1,256 masl (Year +5).</li> </ul>
Year +6 to Year +10	<ul style="list-style-type: none"> <li>■ Construct upgrades or expanded processing facilities for production increase.</li> <li>■ East Pushback 2 pit mined to pit bottom on 1,380 bench (Year +7).</li> <li>■ West Pushback pit mined to pit bottom on 1,300 bench (Year +9).</li> <li>■ North Pushback 1 pit mined to the 1,310 bench (Year +10); North Pushback 2 pit mined to the 1,410 bench (Year +10).</li> <li>■ South pushback pit mined to 1,670 bench (Year +10).</li> <li>■ Processing plant upgrades to mill 12 Mtpa in Year +6 to Year +10.</li> <li>■ Expansion of Lower Waste Stockpile to ultimate 1,470 masl lift (Year +8); completion of stockpiling (Year +10).</li> <li>■ Upper Waste Stockpile grubbing and site preparation, foundation preparation, and water management construction (Year +10).</li> <li>■ Re-handle to crusher of 2 Mt from LGO Stockpile.</li> <li>■ West Dam – First stage lift construction to 1,345 masl (Year +6).</li> <li>■ Main Dam C – Monitoring and annual raises to 1,329 masl (Year +10).</li> <li>■ Main Dam D – Construction of starter dam to 1,240 masl, annual raises to 1,298 masl (Year +10).</li> <li>■ Environmental Control Dam – Construction and operation of dam and pond starting in Year +6; Pumpback of water to the TSF D Pond.</li> </ul>
Year +11 to Year +18	<ul style="list-style-type: none"> <li>■ North Pushback 1 pit mined to pit bottom on 1,260 bench (Year +11).</li> <li>■ North Pushback 2 pit mined to pit bottom on 1,140 bench (Year +14).</li> <li>■ South Pushback pit mined to pit bottom on 1,160 bench (Year +18).</li> <li>■ Processing plant upgrade to increase annual throughput to 20 Mtpa in Year +11 to end of operations.</li> <li>■ Progressive reclamation and monitoring at Lower Waste Stockpile.</li> </ul>



	<ul style="list-style-type: none"> <li>■ Expansion of Upper Waste Stockpile to 1,620 masl lift with cessation of stockpiling (Year 18)</li> <li>■ Re-handle to crusher of remaining stockpiled LGO (Year +13, Year +14 and Year +15, stockpile depleted by Year +18).</li> <li>■ West Dam – Second stage lift construction to 1,353 masl (Year +12).</li> <li>■ Main Dam C – annual raises to ultimate build of 1,353 masl (Year +18).</li> <li>■ Main Dam D – annual raises to the ultimate build of 1,324 masl (Year +18).</li> <li>■ Saddle Dam – Initial construction to 1,337 masl (Year +12) and raise in two stages to final elevation of 1,353 masl by Year +18).</li> <li>■ WMP relocated to accommodate continued filling of TSF C (Year +12).</li> </ul>
Year +19 to Year +23	<ul style="list-style-type: none"> <li>■ Decommissioning of electrical distribution system to Open Pit for mining fleet.</li> <li>■ Milling of LGO Stockpile reclaim at 20 Mt per annum (Year +19 to Year +23).</li> <li>■ Main Dam D – Raised to final elevation of 1,331 masl (Year +20).</li> <li>■ TSF C Pond – Conveyance of supernatant to Open Pit for infilling starting Year +19; serves as process water source; tailings infill ceases Year +21.</li> <li>■ Decommissioning of the WMP and the Metals WTP.</li> <li>■ Initiate final mine closure plan agency and Indigenous engagement to confirm end land use plan and schedule.</li> <li>■ Initiate closure and reclamation plan for pits and waste stockpiles.</li> <li>■ Initiate mine site wide closure and reclamation of infrastructure not required for LGO processing and waste management.</li> </ul>

## 8 Detailed Work Plans

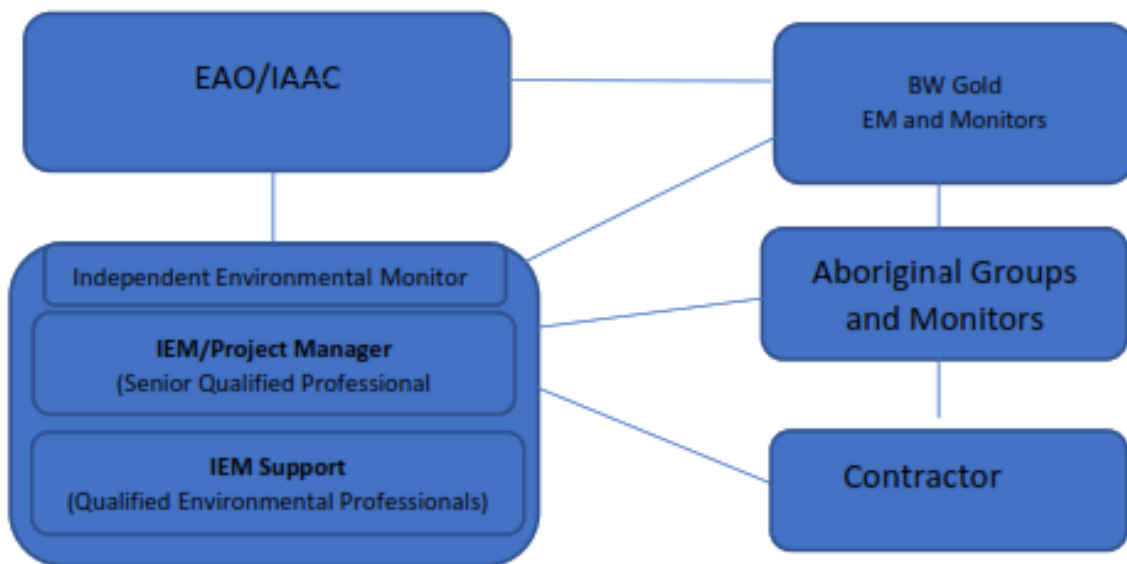
As per Condition 12 (m) of the EAC, a detailed work plan for each phase of the Project will be submitted to the EAO for approval prior to the start of the relevant Project phase (Refer to Appendix A). The work plans will describe the typical frequency of IEM inspections and rationale, the procedure for communicating non-compliances to the EAO, Aboriginal Groups, and the Certificate Holder/proponent in accordance with Section 10.1 and will describe the format and frequency of IEM(s)' report both routine and incident related (described in Section 10.1). The format of the IEM reports will be agreed upon through consultation between the EAO, IAAC, Certificate Holder/proponent, and Aboriginal Groups. The monthly IEM meetings will include regular updates on construction progress, planned activities, discussion on the most recent IEM report, and any non-compliances and status updates and documentation regarding efforts to rectify, previous non-compliances. Similar discussions will be held during monthly ELoMC meetings, although updates related directly to the IEM are likely to be provided at a higher level.

Should the project enter a temporary suspension or care and maintenance period for any reason, IEM monitoring will continue to ensure compliance to EAC and DS conditions, however, the frequency of visits may be reduced depending on the potential risks present at site during that time. A workplan will be prepared outlining the anticipated changes in IEM inspection frequency and reporting and communication linkages.

## 9 IEM Structure and Approach

The IEM integration into the Project is depicted in Figure 9-1. As an independent inspector the IEM will communicate directly with BW Gold, Aboriginal Groups and their Monitors, and regulators. Site inspection scheduling and information requests (desktop, or in field) will be directed to BW Gold, while inspection and incident reporting will be directed and submitted to all parties at the same time. The IEM will confirm the reporting distribution list with all groups prior to the first site inspection. The distribution list may be updated from time to time as requested.

During field inspections the IEM may direct communications and questions to the EM, environmental monitors, Aboriginal Group Monitors, and/or construction team as needed.



**Figure 9-1: IEM Organizational Communication Structure**

### 9.1 IEM Project Review Process

The IEM will complete desktop reviews before the field inspections as required and will encourage participation, when appropriate, of the Aboriginal Group Monitors, EM and Construction Supervisors. To support this desktop exercise, the EM, or designate, will provide a summary of all environmental incidents to the IEM.

Project inspection and compliance review will be guided by four basic concepts:

1. Observation: Activity has been observed and compliance or non-compliance has not been determined at the time of reporting.
2. Compliance: Complies with EA Certificate, Federal DS and implements associated MPs appropriately.
3. Non-compliance: An activity that deviates from the EAC or Federal DS conditions,

MPs and/or other Project authorizations and applicable legislation or regulations.

4. Environmental Incident: An activity that results in, or has the potential to result in, material environmental damage and does not comply fully with the EAC, Federal DS, Project authorizations and/or relevant legislation. Environmental Incidents are considered non-compliance events most likely associated with moderate or high impacts on the environment (Section 10). Specific examples include but not limited to:
  - Spill to water or ground in exceedance of levels in Schedule 1 Spill Reporting Regulation including 200kg or litres of any substance that can cause pollution;
  - Unauthorized deposition of liquid or solid material not in accordance with Fisheries Act, or Environmental Management Act; and
  - Destruction of a wildlife feature such as an active bird nest or unauthorized destruction of wildlife in contravention of the BC Wildlife Act or Species at Risk Act.
  - Construction of project component not authorized in the Certified Project Description

The IEM has the authority to temporarily suspend work and notify the Holder upon discovering any EAC non-compliance or high-risk potential non-compliance (Figure 9-2).

## 9.2 IEM Communications and Reporting

The IEM will produce site inspection reports using mPro or equivalent (a software package) for each trip to site which will include results from the pre-visit desktop review, field inspections (photos and notes), information gathered from site staff and results from the previous site visit (refer to Appendix B). The reports will include any potential or actual non-compliances with the EAC or Federal DS, as well as any environmental incidents identified during the visit including but not limited to the following:

- Summary of project activities observed and planned activities, if known;
- Inspection summary including identified environmental incidents, non-compliances and work in compliance including general observations with a record identification number for each item (e.g. observation, non-compliance);
- Date of the occurrence of incidents and non-compliances and reference to the applicable EAC, DS condition or MP commitment;
- Whether designated project activities were changed or stopped as a result of the occurrence;
- Root and contributing causes as provided by BW Gold following appropriate investigation (if available – Note: as a compliance inspector it is not the responsibility of an IEM to investigate root causes, but root cause determination will be presented in reporting when available);

- Actions taken to immediately correct the situation and how the occurrence(s) of non-compliance was, or were, corrected by the proponent (visually observed by IEM or details provided by BW Gold);
- IEM recommendations to BW Gold to for corrective action(s);
- Date that the corrective action(s) was, or were, completed by the Proponent and subsequent compliance assessment and an evaluation of their effectiveness;
- Process and procedural development plan to prevent recurrence (as provided by BW Gold prior to report being issued); and
- If any, the status of pending occurrences of non-compliance that have not been corrected yet by the proponent and a description of any adverse environmental effects associated with the occurrences of non-compliance.

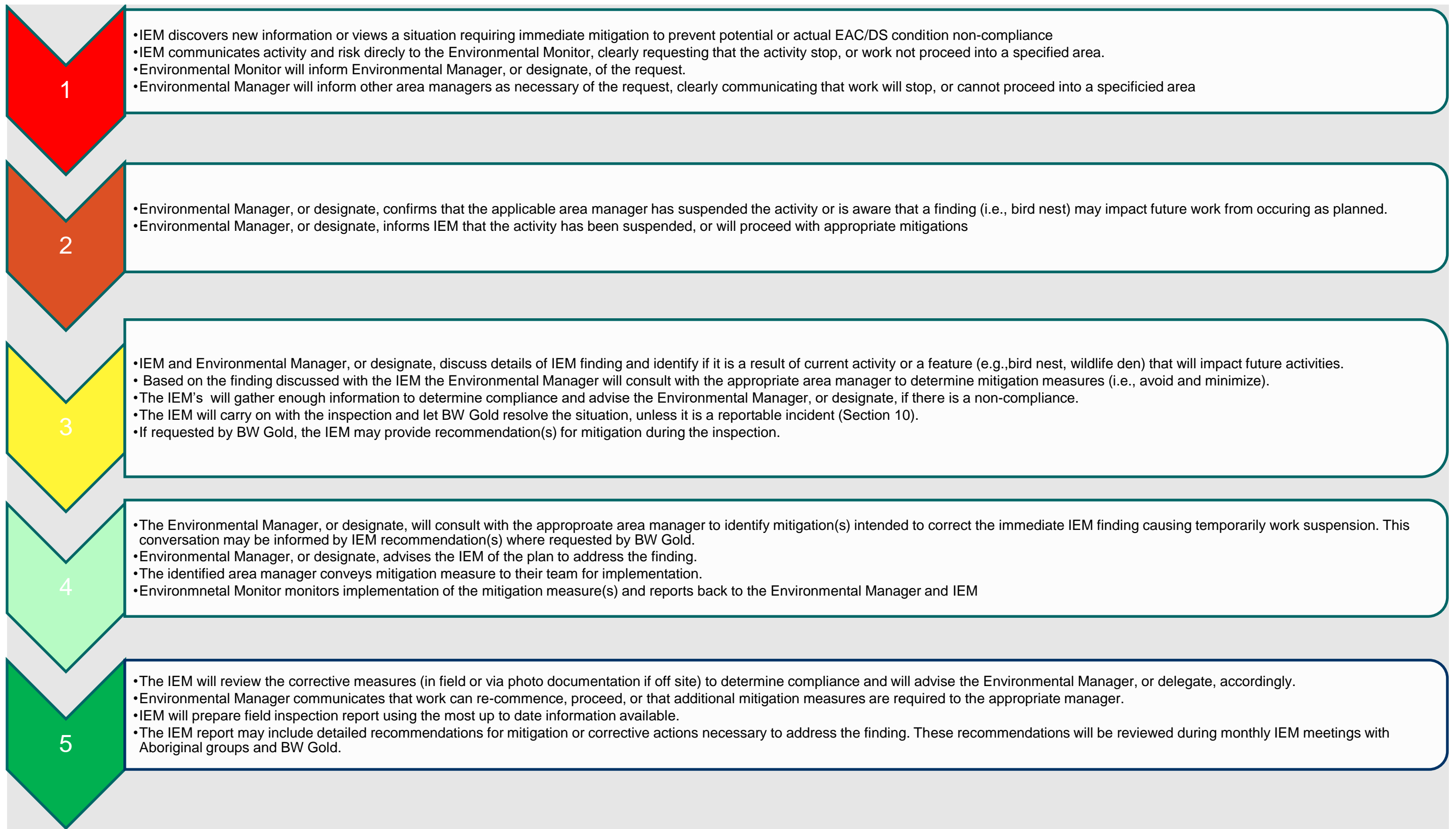
The IEM may also include supplemental information in the report as provided by BW Gold including:

- Plan for how BW Gold personnel with potential to interact with the situation have been briefed;(as provided by BW Gold prior to report being issued);
- Plan for any training on new process and procedures (as provided by BW Gold prior to report being issued);

IEM reports will be provided to the EAO, IAAC, BW Gold and Indigenous Groups, and Aboriginal Group Monitors within 10 days of their production to align with Federal DS Condition 9.4.

If non-compliances or environmental incidents were documented during the IEM inspections, they will be communicated to Indigenous groups, EAO, and the IAAC following the protocol outlined in Table 10-1 and using contact information from Appendix C. Formal reporting of an incident to external agency (where required by law) such as reportable spills by volume, are the responsibility of the Certificate holder/proponent or their delegate.

If the IEM identifies a non-compliance that warrants a temporary suspension of construction or operational activity (or an element thereof) BW Gold will follow the protocols outlined in Figure 9-2



**Figure 9-2: Process for Communicating and Resolving non-compliances on the Project**

The process to recommence work if a temporary suspension is invoked will be developed on a case-by-case basis. At a minimum, the mitigation plan prepared by BW Gold to recommence work will include:

- The location of the non-compliance, or possible non-compliance, as identified by the IEM and rationale to the Environmental Manager or Environmental Monitors;
- BW Gold will investigate the root cause of the non-compliance;
- BW Gold will document actions taken to immediately correct the situation (e.g. buffers/setback flagged, alternate timing implemented, alternate mitigation, qualified environmental professional engagement etc.);
- Process and procedure developed by BW Gold to prevent recurrence;
- Documentation by BW Gold that all personnel with potential to interact with the situation have been briefed and trained on any new process and procedures; and
- Provide an update to the IEM as soon as practical. If the field inspection is still active, the IEM will review and document the corrective measures and determine if conditions are in compliance.

Non-compliances documented during the IEM inspections will be communicated to Indigenous Groups, EAO, and the IAAC following the incident categorization process and timelines in issues. If reporting of the same non-compliance is also required to other agencies, the Holder will complete that reporting independently of the reporting that the IEM will do to Aboriginal Groups, EAO and IAAC.

Environmental Incident reporting requires an expedited approach which is outlined in Section 10 below.

## **10 Environmental Incident Review and Reporting**

Environmental Incidents are considered non-compliance events most likely associated with moderate or high impacts on the environment. If the IEM observes a non-compliance that is considered an Environmental Incident (or has the potential to be), the IEM will immediately notify BW Gold (by phone, radio or in person) and strive to collect the necessary information to appropriately inform the EAO, IAAC, and Indigenous Groups.

Notification of non-compliances and environmental incidents is ultimately the responsibility of BW Gold (Condition 7 of Schedule B) including those that trigger provincial or federal reporting (e.g., Spill Reporting Regulation, EMA, or Fisheries Act). However, the IEM may choose to report immediate findings to EAO, IAAC and Aboriginal Groups should notification by BW Gold be delayed. This will be done by email using the most recent contact list; and may be followed up with an Environmental Incident Form by the IEM when deemed necessary.

Table 10-1 has been adopted from MFLNRORD for IEM roles in southern BC and will be used by the IEM as a point of reference when reviewing and communicating the magnitude or the likelihood of recurrence of non-compliant events. The discretion will be up to the IEM as there are other factors that must be reviewed before magnitude and likelihood determinations can be

made. The IEM may choose to initiate discussion with EAO and IAAC for moderate/high magnitude non-compliances and will take direction from them as to what they deem appropriate.

The following definitions have been adopted from MOECCS compliance and enforcement policy and procedure (2019). The magnitude of actual or potential impact to the environment (Low/Moderate/High) is defined as:

**Low** - Non-compliance that does not result or is unlikely to result in any environmental impact;

**Moderate** - Non-compliance resulting in a moderate, temporary impact on the environment or moderate, temporary impact to human health; and

**High** – Non-compliance resulting in a significant impact to the environment or to human health (may be temporary or permanent) and likely triggers reportable offenses under provincial/federal legislation.

The likelihood of repeat or ongoing occurrences (Low/Moderate/High) is defined as:

**Low** – In the IEM’s opinion, indications of future and continual compliance are high, there are no previous occurrences of non-compliance and there is a good demonstration of awareness and capacity to meet the regulatory requirements;

**Moderate** – Indications of future and ongoing compliance are unlikely, due to inconsistencies noted with mitigation implementation or lack of understanding of requirements; and

**High** – No indication of future and ongoing compliance, with little or no demonstrated willingness or capacity to meet the regulatory requirement.

Observed issues with low potential for environmental impacts or low frequency (white cells, Table 10-1) will be reported in the routine IEM summary report.

Incidents that cause or have the potential to immediately cause negative impacts to the environment (such as a spill to water) are ranked high in the table. This is especially important for incidents involving waterbodies classified as Class 1 or 2 in the Yinka Dene Water Law (Refer to Table 10-2). Conditions that have the potential to cause negative effects due to the duration or frequency of activity are also ranked high in the table (such as conducting earth works in wet areas near sensitive receptors without adequate runoff, erosion and sediment control in place).



**Table 10-1: Criteria to be used to assess and report the severity of environmental incidents**

		Likelihood of Repeat/Ongoing Occurrence		
		High	Moderate	Low
<b>Magnitude of Impact</b>	<b>High</b>	Possible Stop Work Order issued to BW Gold; EAO/IAAC, Indigenous Groups Notification within 24 hours. Event noted in IEM report, mitigative measures to be implemented by Certificate holder/proponent and follow-up by IEM required.	Possible Stop Work Order issued to BW Gold; EAO/IAAC, Indigenous Groups Notification within 24 hours. Event noted in IEM report, mitigative measures to be implemented by Certificate holder/proponent and follow-up by IEM required.	Possible Stop Work Order issued to BW Gold; EAO/IAAC, Indigenous Groups Notification within 24 hours. Event noted in IEM report, mitigative measures to be implemented by Certificate holder/proponent.
	<b>Moderate</b>	Possible Stop Work Order issued to BW Gold; EAO/IAAC, Indigenous Groups Notification within 24 hours. Event noted in IEM report, mitigative measures by Certificate holder/proponent and follow up by IEM required.	Event noted in IEM report, Certificate holder/proponent obligated to complete mitigative measures; follow-up by IEM required.	Event noted in IEM report.
	<b>Low</b>	Event noted in IEM report, Certificate holder/proponent obligated to complete mitigative measures; follow-up by IEM required.	Event noted in IEM report.	Event noted in IEM report.

Environmental incidents (gray shaded cells, Table 10-1) will be reported to EAO, IAAC Aboriginal Groups and BW Gold within 24 hours using the contact information contained in Appendix C. There may be events that do not fit these criteria, it will be up to the discretion of the IEM to elevate as needed. Low-risk issues will be reported in the routine IEM inspection report. All non-compliances with the Federal DS must be reported to IAAC within 48 hours, as required in Condition 9.5 of the DS and this reporting will also follow the gray shaded cells, Table 10 1.

The IEM will communicate directly with BW Gold to verify the mitigative actions were completed. If necessary, the IEM will utilize the protocol identified in Section 10.1 to facilitate resolution and any escalation of a non-compliance.

**Table 10-2: Nechako First Nations' Classification of Waterbodies Under YDWL**

Class I	Class II	Class III
<b>Waterbodies Potentially Affected by Mine Discharge</b>		
Tatelkuz Lake Nechako Reservoir (Natalkuz Lake and Knewstubb Lake)	Chedakuz Creek	Davidson Creek
<b>Waterbodies Potentially Affected by the Transmission Line</b>		
Nechako River Stellako River Fraser Lake Big Bend Creek Cabin Creek Cut-off Creek Fifteen Creek Robertson Creek Smith Creek Targe Creek.	Chedakuz Creek	Davidson Creek

## 10.1 Conflict Resolution

Should a conflict arise, or if required actions are not being implemented in an appropriate time frame to address non-compliance, the IEM will:

1. Re-evaluate the issue, confirm it is relevant and supported by the appropriate EAC and Federal DS conditions and legislation.
  - a. The IEM may consult with senior EDI advisors, BW Gold, the EAO, IAAC, or Aboriginal Groups and their monitors, including Chiefs and representatives from each Nation, as necessary. This may also include senior executives from relevant Provincial Agencies as needed.
  - b. Based on initial re-evaluation, the IEM will either adjust their position or proceed to the next step.
2. Offer to arrange a meeting within 7 days with the relevant parties to initiate an open dialogue regarding the issue.
  - a. The IEM must clearly outline the issue or concern and potential measures to resolve the issue and allow others to participate in the discussion and express their respective positions.
  - b. The IEM will re-evaluate the issue and/or root cause of the issue as any new information is provided. The IEM will be prepared to adjust their position should the appropriate rationale be provided while adhering to the EAC/Federal DS conditions established for the project.
  - c. If resolved, the appropriate documentation must be provided by the respective parties including meeting minutes and any revised plans/procedures with justification for revision.
  - d. Outcomes will be documented by the IEM within the monthly IEM summary report.
3. In the event the IEM cannot resolve the matter by following Steps 1 and 2, the IEM will advise the EAO, IAAC, ELoMC, and the Certificate holder/proponent as necessary,

based on the nature of the issue.

- a. If the source of the conflict is in relation to the direct or imminent contravention of the EAC/Federal DS conditions, and/or the issuance of a Stop Work Order, the IEM will defer the matter to the appropriate regulatory agency(s).
- b. If the conflict is a result of a difference of opinion or interpretation as to a non-compliance or assessment of risk as would relate to the EAC/Federal DS conditions, the IEM will document their concern in a formal memo and provide it to the Certificate holder/proponent, Aboriginal Groups and appropriate regulatory agency(s) including senior executives from relevant Provincial Agencies and applicable Statutory Decision Makers as needed. It will be incumbent upon the Certificate holder/proponent to further manage the risk and potential consequences.

All steps taken in relation to matters of compliance and/or resolving conflict will be documented by the IEM, and include a record of attendees, key concerns and communications, and outcomes of discussions.

## 10.2 Project Phase Completion Reporting

The IEM will require timely notification of the pending completion of a project phase, and requests two weeks of notice. The IEM team will rely on the Certificate holder/proponent to provide this advance notice and official date of phase completion in order to meet the timelines indicated below. At the completion of each project phase a summary report will be developed by the IEM and sent to the to the EAC/Federal DS Holder/Proponent and required Indigenous Groups in draft form for an accuracy review no later than 90 days after the completion of the project phase. The reports will be reviewed by those parties over a period of 45 days and then the IEM will finalize and submit the report to the EAO C&E branch as well as the IAAC. The reports will include, but not necessarily be limited to, the following:

- a record of all non-compliances with the EAC and Federal DS;
- a record of the recommendations made by the IEM(s) to the Holder/Proponent to prevent or address any non-compliance with the EAC/Federal DS;
- a record of whether, and how, any such recommendations from the IEM(s) and other parties were implemented and the corresponding outcome of implementation;
- a record of all stop work orders issued to prevent or address a non-compliance with the EAC and any Provincial or Federal legislation or authorization applicable to the Project;
- assessment of the effectiveness of the mitigation measures for Construction, Operations, Closure and Post-Closure; and;
- recommendations on how to achieve and maintain compliance with the conditions of the EAC and Federal DS for the next Project phase.

## **11 Process and Protocols for Inviting the Aboriginal Group Monitors (Required by EAC Condition 17) to Onsite Inspections**

The selection process of Aboriginal Group Monitors is described in the EAC Aboriginal Group Engagement Plan (Section 6.1). This process included canvassing each Aboriginal Group for feedback on the potential candidate(s) and consequently inviting a representative of each Aboriginal Group to participate in an IEM meet and greet meeting and site visit.

The safety and training requirements for Aboriginal Group Monitors involved in IEM inspection activities will be managed by BW Gold Environmental Manager or designate. The Aboriginal Group Monitors will undergo all site orientation training requirements as well as whatever mine site specific access training that may be required (e.g., driving in the mine, working from heights). All efforts will be undertaken to ensure that Aboriginal Group Monitors receive all training required to work safely while on site, however, there may be unforeseen situations where IEM verification activities include accessing higher risk areas on the project site where the Aboriginal Group Monitor may not have the necessary training to work safely. Under the rare situation where this is the case, the IEM will report back to the Aboriginal Group Monitor at their earliest opportunity summarizing their observations, findings, photos etc. and reviewing the information together. This will both prevent any situations where the Aboriginal Group Monitor would be in a potentially unsafe or untrained situation while still ensuring information is passed on and reviewed. Another situation where it may not be appropriate for the Aboriginal Group Monitor (when and if they are acting as an employee of BW Gold) to participate in portions of an inspection may be if the IEM documents a non-compliance or incident that requires more in-depth investigation or discussion with the regulator or the IEM team. In these circumstances it may not be appropriate for the Aboriginal Group Monitor or other BW Gold staff to be present during all communications or meetings. However, all information related to an IEM investigation will be shared out as per Section 10 and this distribution will include the Aboriginal Group Monitors.

The means by which BW Gold will engage with Aboriginal Groups on the implementation of the IEM requirements is through the monthly ELoMC and IEM meetings Schedule A of the ELoMC Terms of Reference requires BW Gold to track the status of the implementation of all EAC conditions in a tracking table (EAC Condition Tracking Table) and to distribute this document to the ELoMC (which includes representatives of Aboriginal Groups and provincial regulators).

## **12 Compliance Obligations, Guidelines, and Best Management Practices**

A summary of key federal and provincial regulations in addition to the EAC and Federal DS requirements for the IEM to consider during site compliance verifications include and are presented in Tables 13-1 and 13-2. While these conditions may be considered as part of the IEM inspection providing compliance determinations on those authorizations outside of the EAC and Federal DS is not within the IEM scope.

## 12.1 Legislation or Regulations

### 12.1.1 Federal

Relevant federal legislation are presented in Table 12-1.

**Table 12-1: Relevant Federal Legislation**

Legislation	Responsible Agency	Description
<i>Canadian Environmental Protection Act, 1999</i>	Environment and Climate Change Canada (ECCC)	Aims at preventing pollution and protecting the environment and human health from the effects of deleterious substances.
<i>Explosives Act</i>	Natural Resources Canada	Regulates the manufacture, testing, acquisition, possession, sale, storage, transportation, import, and export of explosives and the use of fireworks.
<i>Fisheries Act</i>	Fisheries and Oceans Canada	Authorizes habitat alteration, disruption and destruction (HADD) of fish habitat and prohibits the deposit of deleterious substances into waters frequented by fish unless authorized by the Metal and Diamond Mining Effluent Regulations (MDMER).
<i>Migratory Birds Convention Act, 1994</i>	Environment and Climate Change Canada	Prohibits deposition of substances that are harmful to migratory birds in waters or in an area frequented by migratory birds and disturbance or destruction of migratory bird nests or shelters.
<i>Seeds Act</i>	Canadian Food Inspection Agency	Regulates grading of seed sold, imported, and exported in Canada and requires that seed is free of prohibited noxious weeds or disease and ensuring standards of purity.
<i>Species at Risk Act</i>	Environment and Climate Change Canada	Prevents Canadian aboriginal species, subspecies, and distinct populations from becoming extirpated or extinct, provides for the recovery of endangered or threatened species, and encourages the management of other species to prevent them from becoming at risk.
<i>Transportation of Dangerous Goods Act</i>	Transport Canada	Promotes public safety when dangerous goods are being handled, offered for transport or transported by road, rail, air, or water by establishing safety requirements.

## 12.1.2 Provincial

Relevant provincial legislation are presented in Table 12-2.

**Table 12-2: Relevant Provincial Legislation**

<i>Environmental Management Act</i>	Ministry of Environment and Climate Change Strategy	Authorizes discharges to water, land and air, storage/treatment of wastes, disposal of solid waste to the land. The Project received <i>Environmental Management Act</i> Permit 110652 on May 3, 2023, which authorizes effluent discharge, and Permit 110650 which authorizes atmospheric discharge.
<i>Forest Act</i>	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Regulates Crown forest management, including tenures and harvest requirements.
<i>Forest and Range Practices Act</i>	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Governs forest and range practices on Crown land during all stages of planning, road building, logging, reforestation and/or grazing, and establishes ungulate winter range.
<i>Heritage Conservation Act</i>	Ministry of Forests, Lands, Natural Resource Operations and Rural Development	Protects and conserves heritage property on Crown and private land, including protection of archaeological sites.
<i>Integrated Pest Management Act</i>	Ministry of Environment and Climate Change Strategy	Regulates sale and use of pesticides, which are defined as a "micro-organism or material that is represented, sold, used or intended to be used to prevent, destroy, repel or mitigate a pest"
<i>Mines Act</i>	Ministry of Energy, Mines and Low Carbon Innovation	The Act and Health, Safety and Reclamation Code for Mines in BC regulates mining activities, including mineral exploration, mine development, and reclamation and closure. The Project received Mines Act Permit M-246 for Major Works on March 9, 2023.
<i>Transport of Dangerous Goods Act</i>	Ministry of Transportation and Infrastructure	Regulates the transportation of dangerous goods on BC highways and provincial ferry routes.
<i>Water Sustainability Act</i>	Ministry of Environment and Climate Change Strategy	Authorizes short-term water use, changes in and about a stream, water storage, withdrawals and diversions, and groundwater wells.
<i>Weed Control Act</i>	Ministry of Forests, Lands, Natural Resources Operation and Rural Development	Designates certain invasive plants as 'noxious weeds' and imposes a duty on all those occupying land in BC to control noxious weeds growing on their land.
<i>Wildfire Act</i>	Ministry of Forests, Lands, Natural Resources Operation and Rural Development	Manages wildfire risks and provides for recovery of costs associated with wildfire response.
<i>Wildlife Act</i>	Ministry of Forests, Lands, Natural Resources Operation and Rural Development	Governs protection of wildlife and wildlife habitat, and wildlife management, including alien species, angling, hunting, trapping and guide outfitting, and firearms, and designation of wildlife management areas and species at risk. Section 34 of the Act protects birds, eggs, and occupied nests from possession, molestation, injury, or destruction. Unoccupied nests of certain species are also protected under the Act.

### 12.1.3 Key Regulations

A summary of key federal and provincial regulations in addition to the EAC and Federal DS requirements for the IEM to consider during site compliance verifications include and are presented in Table 12-3.

**Table 12-3: Summary of Key Applicable Regulations**

Legislation	Enabling Statute	Description
<b>Federal</b>		
<i>Explosives Regulation</i>	<i>Explosives Act</i>	Regulates the safe and secure handling of explosives.
<i>Migratory Birds Regulations</i>	<i>Migratory Birds Convention Act, 1994</i>	Prohibits the disturbance or destruction of migratory bird nests or shelters.
<i>On-road Vehicle and Engine Emission Regulations</i>	<i>Canadian Environmental Protection Act, 1999</i>	Establishes emission standards for on-road vehicles including passenger cars, light trucks, motorcycles, and heavy-duty vehicles.
<i>Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations</i>	<i>Canadian Environmental Protection Act, 1999</i>	Regulates the storage of petroleum products.
<i>Transportation of Dangerous Goods Regulations</i>	<i>Transportation of Dangerous Goods Act</i>	Promotes safety when dangerous goods are being handled, offered for transport.
<b>Provincial</b>		
BC Building Code 2018	<i>Ministry of Municipal Affairs and Housing</i>	The BC Building Code regulates new construction, building alterations, repairs and demolitions are completed.
BC Fire Code 2018	<i>Ministry of Municipal Affairs and Housing</i>	Regulates construction, use and demolition of buildings and facilities and design, construction and use of specific elements of facilities related to certain fire hazards, and protection measures for the current or intended use of buildings.
<i>Contaminated Sites Regulation</i>	<i>Environmental Management Act</i>	Provides regulations for contaminated site determination, remediation standards, and planning.
<i>Forest Planning and Practices Regulation</i>	<i>Forest and Range Practices Act</i>	Establishes riparian area, soils, and wildlife objectives and practice requirements.
<i>Hazardous Waste Regulation</i>	<i>Environmental Management Act</i>	Addresses the registration of hazardous waste, requirements for hazardous waste facilities containers for storing and transporting hazardous wastes, licensing of hazardous waste carriers, and requirements for specific types of hazardous waste.
<i>Integrated Pest Management Regulation</i>	<i>Integrated Pest Management Act</i>	Regulates the storage, sale, transportation, and use of pesticides for pest control.
<i>Invasive Plants Regulation</i>	<i>Forest and Range Practices Act</i>	Identifies invasive plant species in British Columbia.



Legislation	Enabling Statute	Description
<i>Occupational Health and Safety Regulation</i>	<i>Workers Compensation Act</i>	Promotes occupational health and safety and protects workers and other persons present at workplaces from work-related risks to their health, safety, and well-being.
<i>Open burning Smoke Control Regulation</i>	<i>Environmental Management Act</i>	Governs the burning of vegetative material associated with a range of activities, such as land clearing, forestry operations, and agriculture.
<i>Petroleum Storage and Distribution Facilities Storm Water Regulation</i>	<i>Environmental Management Act</i>	Applies to every petroleum storage facility in British Columbia and regulates the discharge of a hydrocarbon contaminated stormwater into the environment.
<i>Spill Contingency Planning Regulation</i>	<i>Environmental Management Act</i>	Places a proactive obligation on regulated persons in order to demonstrate their capability to respond to a spill of a prescribed quantity.
<i>Spill Preparedness Response and Recovery Regulation</i>	<i>Environmental Management Act</i>	Prescribes when spill contingency plans must be updated, reviewed, and tested.
<i>Spill Reporting Regulation</i>	<i>Environmental Management Act</i>	Establishes a protocol for reporting the unauthorized release of substances into the environment as well as a schedule detailing reportable amounts for certain substances.
<i>Transport of Dangerous Goods Regulation</i>	<i>Transport of Dangerous Goods Act</i>	Promotes safety when dangerous goods are being handled, offered for transport on highways in British Columbia.
<i>Weed Control Regulation</i>	<i>Weed Control Act</i>	Classifies weeds as noxious within British Columbia and regulates the practices to control noxious weeds.
<i>Wildfire Regulation</i>	<i>Wildfire Act</i>	Describes obligations with respect to prevention and control as well as campfires and open fire regulations.

## 12.2 Guidelines and Best Practices

In addition to relevant legislation and regulations, a number of best management practices and guidelines should be considered during the IEM site verification visits as potentially supporting management plans. These documents include:

- *A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia* (FLNRO 2014);
- *A Field Guide to Fuel Handling, Transportation, and Storage* (BC MWLAP 2002)  
<http://www2.gov.bc.ca/gov/DownloadAsset?assetId=520793AF081F4F5DBD6BAE39BC79BC7F>;
- *Fish-stream Crossing Guidebook* (FLNRO 2012);
- *Terms and Conditions for Changes in and about a Stream Specific by MOE Habitat Officers, Omineca Region* (FLNRO 2004);
- *BC Ambient Air Quality Objectives and Standards* (BC MOE 2013)

<http://www.bcairquality.ca/reports/pdfs/aqotable.pdf>;

- *BC Water Quality Guidelines* (BC MOE 2014) <http://www2.gov.bc.ca/gov/topic.page?id=044DD64C7E24415D83D07430964113C9>;
- *BC Hazardous Waste Legislation Guide* (BC MOE 2005) <http://www2.gov.bc.ca/gov/DownloadAsset?assetId=51C5BF7BBC8140FA93CE2C9AEABBC042>;
- BC Ministry of Transportation and Infrastructure *Traffic Control Manual for Work on Roadways* (BC MOTI 1999) [http://www.th.gov.bc.ca/publications/eng\\_publications/TCM/Traffic\\_Control\\_Manual.htm](http://www.th.gov.bc.ca/publications/eng_publications/TCM/Traffic_Control_Manual.htm);
- *Best Management Practices for Amphibian and Reptile Salvages in British Columbia*. (FLNRO 2016);
- *Best Management Practices for Bats in BC* (Holroyd and Craig, 2016);
- *Best Management Practices for Raptor Conservation during Urban and Rural Land Development in British Columbia* (BC MOE 2005);
- *British Columbia Field Sampling Manual* (BC MWLAP 2003) [http://www.env.gov.bc.ca/epd/wamr/labsys/field\\_man\\_pdfs/fld\\_man\\_03.pdf](http://www.env.gov.bc.ca/epd/wamr/labsys/field_man_pdfs/fld_man_03.pdf);
- CCME *Environmental Quality Guidelines for the Protection of Aquatic Life* (CCME 2011) <http://cegg-rcqe.ccme.ca/en/index.html>;
- *Environmental Code of Practice for Metal Mines* (Environment Canada 2012a) <http://www.ec.gc.ca/lcpe-cepa/documents/codes/mm/mm-eng.pdf>;
- *Forested Wetlands-Functions, Benefits, and the Use of Best Management Practices* (Welsch et al. 1995);
- *Guidelines for Metal Leaching and Acid Rock Drainage at Mine Sites in British Columbia* (Price and Errington 1998) <http://www.empr.gov.bc.ca/Mining/Permitting-Reclamation/ML-ARD/Pages/Guidelines.aspx>;
- *Interim Code of Practice: Temporary Stream Crossings* (DFO 2020);
- *Invasive Alien Plant Program: Reference Guide* (BC MOFR 2010a) <http://www.for.gov.bc.ca/hra/plants/RefGuide.htm>;
- *Management Plan for the Western Toad (Anaxyrus boreas) in British Columbia* (2014);
- *Pest Management Plan for Invasive Alien Plants on Provincial Crown Lands in Central and Northern British Columbia* (BC MOFR 2010c) [http://www.th.gov.bc.ca/invasiveplant/documents/Pest\\_Management\\_Plan\\_Forestry.pdf](http://www.th.gov.bc.ca/invasiveplant/documents/Pest_Management_Plan_Forestry.pdf);
- *Policy for Metal Leaching and Acid Rock Drainage in British Columbia* (BC MEM and BC MELP 1998) <http://www.empr.gov.bc.ca/Mining/Permitting-Reclamation/ML-ARD/Pages/Policy.aspx>;
- *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (Price 2009) <http://www.abandoned-mines.org/pdfs/MENDPredictionManual-Jan05.pdf>;
- *Riparian Management Area Guidebook* (BC MOF 1995)

<https://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/riparian/rip-toc.htm>;

- *Wetland Ways: Interim Guidelines for Wetland Protection and Conservation in British Columbia* (Cox and Cullington 2009); and
- Workers' Compensation Board of BC *Engineering Section Report: Construction Noise* (WCB 2000) <https://www2.worksafebc.com/pdfs/hearing/ConstructionNoise.pdf>.

## 13 Record Keeping

The IEM will be responsible for ensuring reports are prepared in accordance with Section 10. Records will be maintained and retained in accordance with Conditions 9.4, 12.1 and 12.2 of the Federal DS respectively. This includes maintaining all records relevant to the implementation of the conditions set out in the Federal DS decision statement. BW Gold must retain records and make them available to the agency throughout construction and operation and for 25 years following the end of decommissioning.

BW Gold shall also retain records 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 provide the agency with the new address. The records will be made available upon request.

## 14 Plan Revision

The IEM ToE will be reviewed by BW Gold every twelve months and will consider all comments brought forward by EAO, ECCC, ELoMC and Aboriginal Groups following initial approval (August 31, 2022). Review will consist of an evaluation of IEM processes, communication protocols and incident management.

Prior to adopting and implementing changes to the IEM ToE, proposed revisions will be reviewed, discussed and a comment review period provided (30 days) with Aboriginal Groups, the Mine Manager, ELoMC and BW Gold staff. After comments are reviewed and the plan is updated (where and as required), final versions of the IEM ToE will be provided to EMLI, FLNRORD, ENV, IAAC and the ELoMC and EAC and DS Aboriginal groups and published on the Artemis website as required by DS Condition 2.14.

## 15 Qualified Professionals

This Terms of Engagement has been prepared and reviewed by the following QPs:

# 16 References

## Legislation

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*Canadian Environmental Protection Act, 1999*, SC 1999, c. 33.

*Environmental Assessment Act*, SBC 2002, c. 43.

*Environmental Management Act*, SBC 2003, c. 53.

*Explosives Act*, RSC 1985, c. E-17.

*Fisheries Act*, RSC 1985, c. F-14.

*Forest Act*, RSBC 1996, c. 157.

*Forest and Range Practices Act*, SBC 2002, c. 69.

*Heritage Conservation Act*, RSBC 1996, c. 187.

*Integrated Pest Management Act*, SBC 2003, c. 58.

*Migratory Birds Convention Act, 1994*, SC 1994, c. 22.

*Mines Act*, RSBC 1996, c. 293.

*Seeds Act*, RSC 1985, c. S-8.

*Species at Risk Act*, SC 2002, c. 29.

*Transport of Dangerous Goods Act*, RSBC 1996, c. 458.

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*Water Sustainability Act*, SBC 2014, c. 15.

*Weed Control Act*, RSBC 1996, c. 487.

*Wildfire Act*, SBC 2004, c. 31.

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Hazardous Waste Regulation, BC Reg. 63/88.

Integrated Pest Management Regulation, BC Reg. 604/2004.

Invasive Plants Regulation, BC Reg. 18/2004.

Migratory Birds Regulations, CRC, c. 1035.

Occupational Health and Safety Regulation, BC Reg. 296/97.

On-Road Vehicle and Engine Emission Regulations, SOR/2003-2.

Open Burning Smoke Control Regulation, BC Reg. 152/2019.

Petroleum Storage and Distribution Facilities Storm Water Regulation, BC Reg. 168/94.

Spill Contingency Planning Regulation, BC Reg. 186/2017.

Spill Preparedness, Response and Recovery Regulation, BC Reg. 185/2017.

Spill Reporting Regulation, BC Reg. 187/2017.

Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, SOR/2008-197.

Transport of Dangerous Goods Regulation, BC Reg. 203/85.

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Weed Control Regulation, BC Reg. 66/85.

Wildfire Regulation, BC Reg. 38/2005.

### **Guidelines and Best Management Practices**

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## **Appendix A: Detailed Work Plan**

May 24, 2022

EDI Project No: 21P0403

Artemis Gold Inc.  
595 Burrard Street, Suite 3083  
Vancouver, BC. V7X 1L3

Attention: Travis Desormeaux, Environmental Manager

**RE: Blackwater Gold Project – EAC M19-01- Condition 12 (m): IEM Workplan for Construction Phase (Draft)**

## INTRODUCTION

The Blackwater Gold Project (Project) received Environmental Assessment Certificate #M19-01 (EAC) on June 21, 2019 under the 2002 Environmental Assessment Act and a Decision Statement on April 15, 2019 under the Canadian Environmental Assessment Act (2012) approving the Project with conditions. Blackwater Gold Mine is an open pit gold and silver mine with associated ore processing facilities located 110 kilometres southwest of Vanderhoof in central British Columbia.

## REGULATORY REQUIREMENT

Environmental Assessment Certificate (EAC) M19-01 Condition 12 (m) requires the certificate holder to develop a detailed IEM workplan for each phase of the Project which is to be submitted to environmental Assessment Office (EAO) for approval prior to the start of the relevant Project phase. BW Gold is providing this draft version of the IEM workplan for the construction phase of the Project. The workplan closely mirrors the details provided in the draft Terms of Engagement (TOE) required by Condition 12 of the EAC and Condition 9 of the Federal Decision Statement (DS) which is currently under review by Aboriginal Groups, EAO and IAAC.

The workplan must describe the following at a minimum:

- frequency of inspections and rationale;
- the manner in which IEM(s) identified non-compliances will be communicated to the EAO, Aboriginal Groups, and the Certificate Holder; and
- the format and frequency of IEM reports



## PROJECT DETAILS AND DRAFT SCHEDULE

BW Gold intends to develop an open pit gold and silver mine as described in Schedule A of the EAC (Figure 1). Early Works construction (as also permitted under authorized by Mines Act M 246 and Environmental Management Act permit 110602) is scheduled to start sometime between Q2 and Q3 2022. Early Work activities will include forest clearing, earthworks (grubbing and stripping) and anticipated construction of the following infrastructure components:

- Clear, grub and construct plant site pad

Pending additional wetlands baseline surveys (required by EAC condition 24) planned for June/July 2022, BW Gold will be updating the Wetlands Offsetting and Management Plan and pending approval by EAO, early work activities may be revised to also include forest clearing, earthworks (grubbing and stripping) and anticipated construction of the following infrastructure components:

- Borrow area and Southern Site C borrow area
- TSF Site C starter dam footprint, borrow and preparation area
- Clearing of freshwater reservoir footprint
- Clear the high- and low-grade ore stockpile footprints
- Clear open pit (20.6 ha of new disturbance)
- Clear upper overburden dump site
- Clear explosives storage, truck shop, operations camp, and ready line and bulk fuel storage
- Clear, grub and construct plant site pad
- Mine Access Road (8 km located on the mine site) and Mine Site Roads

Table 7-1 Project Schedule Overview in the draft ToE outlines anticipated construction activities for Year 1 (2023) and Year 2 (2024) and includes:

- Clear and grub the initial pit phases, the ex-pit haul road, and portions of the ore stockpiles and upper overburden piles
- Construct mine site roads and water management structures
- Prepare sites for process plant, crushers, stockpile pads and Site C tailings dam construction
- Deliver construction rockfill to Site C tailings dam (continues until Y16).
- Energize site with electrical power from grid connection.
- Construct water diversion and management structures and starter dam for TSF
- Construct haul road from the pit to the stockpiles, crusher, and tailings dam
- Initial grade control delineation drilling to 1,580 bench of starter pit
- Establish construction camp and services, partially dismantle exploration camp
- Establish explosives magazine
- Construction borrow pit mined down to 1,510 bench



- Starter pit mined down to 1,610 bench
- Delivery of construction rock to the process area for use in the conveyor pads
- Delivery of construction rock to the Site C tailings dam
- Stockpile high-grade ore on the ROM pad and high-grade ore stockpile for use in mill commissioning
- Stockpile low-grade ore in the low-grade stockpile for storage until the end of mine life
- Deliver excess mined overburden to the upper overburden stockpile
- Construct the water treatment plant
- Construct the mine plant and processing infrastructure
- Commission process plant and first delivery of tailings to TSF

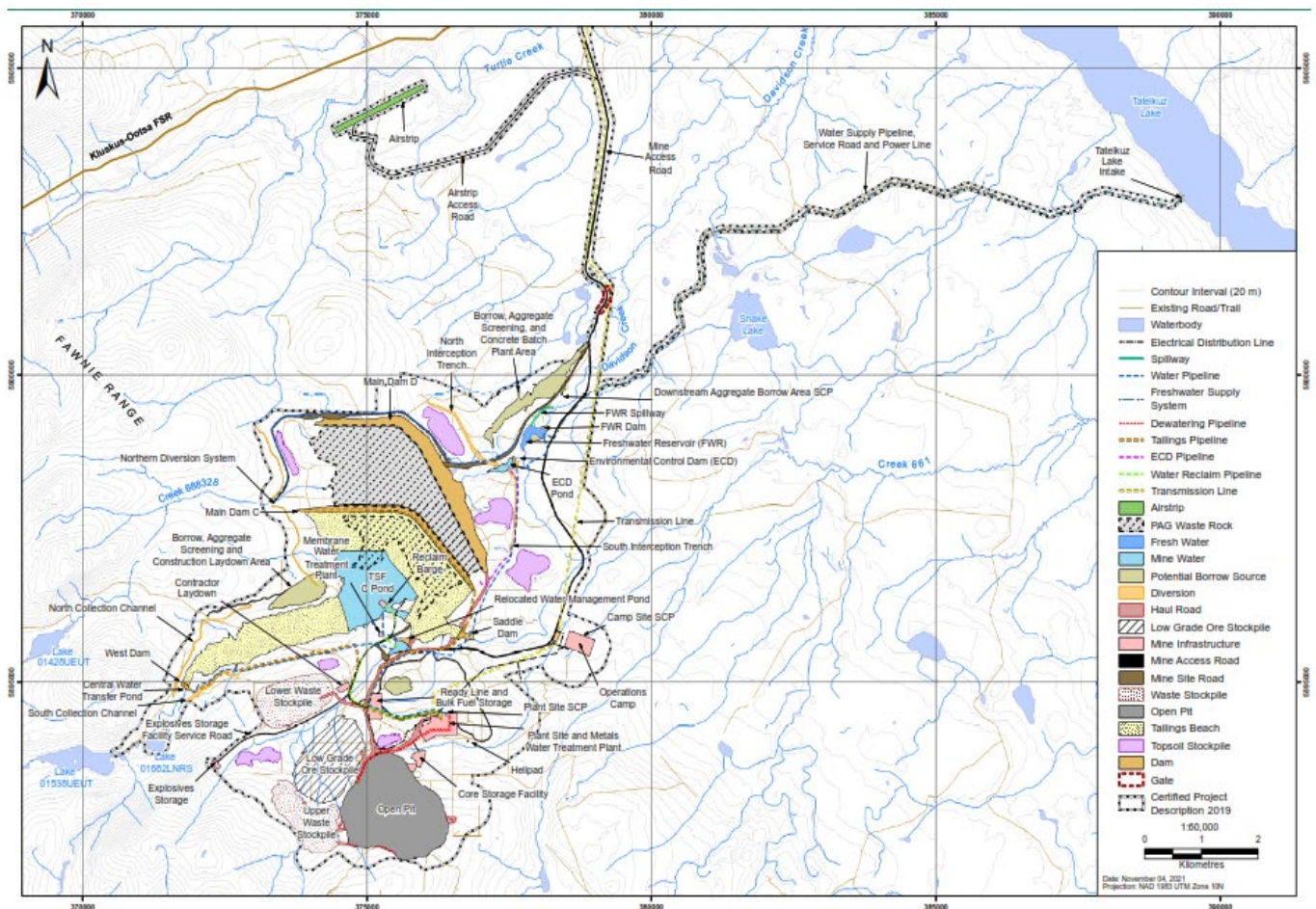


Figure 1. Mine Plan Overview and Infrastructure Components.

The Project Schedule Overview is considered preliminary and will be updated by BW Gold as construction progresses and detailed designs are finalized. Updated construction schedules will be provided to the IEM in a timely manner.



## IEM INSPECTIONS

The IEM will complete a pre-construction site visit in Q2 or early Q3 of 2022 to gain an understanding of the access, landscape, site layout and proposed infrastructure siting, sensitive features and proposed construction plans.

Once construction starts the IEM will complete a minimum of one inspection per month. An increase in IEM inspections will occur as needed to follow up on non-compliance events, review corrective actions implemented or if the IEM feels there is an elevated risk of non-compliance associated with active construction practices. Reduced inspection effort may be reasonable during lower-risk periods in the winter or during low construction activity (limited new work and effective stable mitigation in place).

The IEM will initiate project review prior to construction focused on pre-construction commitments and conditions as outlined in the EAC and associated Management Plans (MP).

IEM field inspections will start sometime in Q2 or Q3 once construction is initiated. The timing of each inspection may vary to accommodate participation of Aboriginal Group Monitors and will be influenced by the level of construction activity or the level of urgency to review outstanding non-compliance events. Where possible the IEM will provide at least 7 days advanced notice to BW Gold so that Aboriginal Group Monitor participation can be scheduled.

The IEM will work with BW Gold and Aboriginal Nation(s) through a bi-weekly planning meeting (to be scheduled) to determine which project execution activities present the greatest level of risks to valued ecosystem components (VEC) and sensitive environmental features on the project site and confirm visit dates and IEM participants.

The nature of the IEM inspection and review will consist of:

- Pre-scheduling visits with BW Gold based on the project schedule and to involve Aboriginal Group Monitors.
- Putting together information requests (IRs) to complete desktop reviews prior to on site inspections to be informed of status of project activities to make best use of time on site.
- Field inspections of active and inactive construction areas including photo documentation and note taking to develop inspection summary reports.
- On-site interviews with relevant project staff where additional information is required beyond field observations to determine compliance with EAC/Federal DS conditions and MP commitments.

## NON-COMPLIANCE COMMUNICATION

Non-compliances are determined by reviewing site practices and evaluating alignment with EAC, DS conditions and MP commitments. The process of communicating non-compliance events will depend on the magnitude of the occurrence and will be based on the matrix provided in Table 10-1 of the ToE. Non-compliance events that are determined to be of low impact will be reported in the monthly IEM inspection





report which will be distributed to all parties at the same time within 10 days of production. The IEM will complete a post-inspection meeting on site with BW Gold and Aboriginal Group Monitors to provide a summary of the inspection and outline all confirmed non-compliances at that time. Further review of project documentation will be completed by the IEM post-inspection to review all observations noted during the inspection.

If the IEM determines there to be a non-compliance with the EAC of moderate or high magnitude, regardless of the likelihood of reoccurrence, or what the IEM determines to be an Environmental Incident (triggers other provincial or federal reporting under regulation) the IEM will immediately (within hours) notify BW Gold (by phone, radio or in person).

Notification of non-compliances and Environmental Incidents is ultimately the responsibility of BW Gold (Condition 7 of Schedule B) including those that trigger provincial or federal reporting. BW Gold will communicate the non-compliance to EAO, Aboriginal Groups and Aboriginal Group Monitor within 24 hours. However, the IEM may choose to report immediate findings should notification by BW Gold be delayed. This will be done by email or phone using the most recent contact list in the ToE and may be followed up with an Environmental Incident Form by the IEM if deemed necessary. Aboriginal Groups prefer notification by phone.

The following definitions have been adopted from MOECCS compliance and enforcement policy and procedure (2019). The magnitude of impact to the environment (Low/Moderate/High) is defined as:

**Low** - Non-compliance that does not result or is unlikely to result in any environmental impact;

**Moderate** - Non-compliance resulting in a moderate, temporary impact on the environment or moderate, temporary impact to human health; and

**High** – Non-compliance resulting in a significant impact to the environment or to human health (may be temporary or permanent) and likely triggers reportable offenses under provincial/federal legislation.

The likelihood of repeat on ongoing occurrences (Low/Moderate/High) is defined as:

**Low** – In the IEM’s opinion, indications of future and continual compliance is high, there are no previous occurrences of non-compliance and there is a good demonstration of awareness and capacity to meet the regulatory requirements;

**Moderate** – Indications of future and ongoing compliance are unlikely, due to inconsistencies noted with mitigation implementation or lack of understanding of requirements; and

**High** – No indication of future and ongoing compliance, with little or no demonstrated willingness or capacity to meet the regulatory requirement.

## **IEM REPORT FORMAT AND FREQUENCY**



The IEM will produce site inspection reports (see Attachment 1) using mPro or equivalent (an internal software package) for each trip to site which will include results from the pre-visit desktop review, field inspections, information gathered from site staff and results from the previous site visit.

The reports will include any potential or actual non-compliances with the EAC or Federal DS as well as any environmental incidents identified during the visit including but not limited to the following:

- Summary of project activities observed and planned activities, if known;
- Inspection summary including environmental incidents, non-compliances and work in compliance including general observations with a record identification number for each item (e.g. observation, non-compliance);
- Date of the occurrence of incidents and non-compliances and reference to the applicable EAC, DS condition or MP commitment;
- Whether designated project activities were changed or stopped as a result of the occurrence;
- Root and contributing causes (if available – Note: as a compliance inspector it is not the responsibility of an IEM to investigate root causes, but root cause determination will be presented in reporting when available or if known);
- Actions taken to immediately correct the situation and how the occurrence(s) of non-compliance was or were corrected by the proponent (visually observed by IEM or details provided by BW Gold)
- Date that the corrective action(s) was or were completed by BW Gold and subsequent compliance assessment;
- Process and procedural development plan to prevent recurrence (as provided by BW Gold prior to report being issued); and
- If any, the status of pending occurrences of non-compliance that have not been corrected yet by the proponent and a description of any adverse environmental effects associated with the occurrences of non-compliance.

The IEM may also include supplemental information in the report as provided by BW Gold including:

- Plan for how BW Gold personnel with potential to interact with the situation have been briefed; (as provided by BW Gold prior to report being issued);
- Plan for any training on new process and procedures (as provided by BW Gold prior to report being issued);

IEM reports will be provided to the EAO, IAAC, BW Gold and participating Aboriginal Groups including the Aboriginal Group Monitors within 10 days of their production to align with CEAA DS Condition 9.4.

BW Gold or the IEM will host a bi-weekly meeting with a relatively fixed agenda to keep all parties informed of project activities and potential issues. A suggested agenda will include the following items during the Construction Phase:





- Summary of previous two weeks of Project activities;
- Forecast of anticipated works to occur in the coming two-week period;
- Environmental issues/concerns related to compliance or incidents;
- Review/discuss any outstanding permitting or regulatory requirements;
- Open discussion; and
- Document meetings with a notes summary.

Any issues or actions identified during the bi-weekly meeting will be summarized and provided to BW Gold for comment/response as necessary, and as directed by the regulators should they participate in the meeting.

A Project phase completion report will be completed at the end of each phase as required by Condition 12 (l) of the EAC. A summary of compliances and non-compliances documents can be prepared annually to support BW Gold's annual reporting requirements if requested.



We trust this draft IEM workplan for construction phase aligns with the ToE and meets the requirements of the EAC Condition 12 (m). It has been prepared using the most recent information as provide by BW Gold and feedback received from Aboriginal Groups.

Regards,

**EDI Environmental Dynamics Inc.**

*Submitted by email*

Eric O'Bryan, RPBio.

IEM Lead

Attachment 1: Monthly report template



Attachment 1 – Example of IEM report template.

IEM Report



Inspections Summary

Inspections submitted between 1/7/2019 and 1/10/2019

Inspection ID	Monitors	Visit	Date	General Locations	Activities	Notes
32	John Doe	Monthly	1/7/2019	Penstock	Review site progress.	

Open Actions

All open actions

Record ID	Inspection ID	Date	Time	Category/Requirement	State	Notes	Action Required	Responsible Party	Due Date	Follow-up
30			9:38:39 AM	Soil Management	Non-Compliant	CEMP Section 4.2: Soil Management Temporary storage of contaminated soils Soils contaminated with hydrocarbons resulting from Project activities will be collected and stockpiled in a designated location for contaminated soil on site, where it will be treated using conventional hydrocarbon "land farming" techniques or transported from site for treatment by a commercial remediation firm.	Plan for contaminated soil treatment or removal from site.		1/31/2019	

Closed Actions

Actions completed between 1/7/2019 and 1/10/2019

Record ID	Inspection ID	Date	Time	Category/Requirement	State	Notes	Action Required	Responsible Party	Due Date	Follow-up	Completed Date
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Observations

Observations recorded between 1/7/2019 and 1/10/2019

Record ID	Inspection ID	Date	Time	Category/Requirement	State	Notes	Responsible Party
91	32	1/7/2019	1:58:40 PM	Wildlife Management - Are snow bank heights managed and gaps provided on mine roads and along the northern portion of the site to allow escape pathways for wildlife?	Compliant	Grading windrow wing to keep bank height low. Higher bank height areas similar to snow depth behind windrow. Natural topography creates exits regularly.	
92	32	1/7/2019	4:05:31 PM	Wildlife Management - Are pullouts and potentially large areas along the northern portion of the site managed to discourage use by snowmobiles for parking and backcountry access locations?	Compliant	Pullouts observed along site appeared to be minimized in length and frequency to maintain safety for road users while minimizing the potential for recreational use parking or turning around with a trailer.	
93	34	1/8/2019	4:14:53 PM	Erosion Prevention and Sediment Control - Is snow removal and storage occurring in accordance with the SEFSCP?	Compliant	Snow piles within the camp and admin areas are located in areas where meltwater will be directed to the existing ponds. Only the western side of camp flows into adjacent vegetation; snow stockpiling in this area is minimized. South access corridor and east quarry are not being plowed at this time.	
118	43	1/9/2019	8:07:04 AM	Wildlife Management - Are snow bank heights managed and gaps provided on mine roads and along the northern portion of the site to allow escape pathways for wildlife?	Compliant		

Journal

Journal entries created between 1/7/2019 and 1/10/2019

Record ID	Inspection ID	Date	Time	Notes
107	43	1/9/2019	4:14:43 PM	Covered Fuel tank still capturing some snow.
117	43	1/9/2019	4:36:02 PM	Clean and organized service area.

## **Appendix B: Example mPro Report Template**



January 19, 2022

Reporting completed for the Blackwater Gold Project by the independent environmental monitor (IEM) will be completed as per the terms of engagement (currently under review). Reporting will include site inspection reports using the mPro reporting application following each site visit. The IEM reporting distribution list will be finalized prior to first site inspection.

## **mPro**

EDI has developed mPro, an environmental monitoring database system that can be catered specifically to the Blackwater project. It can be utilized on tablets or phones and is very convenient and effective.

Developed in 2019 (based off several years of testing on an older platform) to help manage the huge volumes of information collected for EDI's role of the Independent Environmental Monitor for the Site C project, mPro has proven to be an effective, efficient, and stable platform to track field inspections, environmental incidents, and automated report generation.

The mPro application has been developed to manage environmental monitoring data for EDI. Data can be collected while offline with a tablet and managed from a desktop in a web browser. Reports in the Word Document (docx) format can be automatically generated based on date ranges and pre-defined fields. Photos will be included in the reports referenced by Record ID. A sample of the reporting format is attached.



Prepared For  
Client

Prepared By  
EDI Environmental Dynamics Inc.  
301 George Street  
Prince George, BC V2L 1R4

EDI Contact  
John Doe  
IEM Support

EDI Project  
19X0000  
1/15/2019



IEM Report



Inspections Summary

Inspections submitted between 1/7/2019 and 1/10/2019

Inspection ID	Monitors	Visit	Date	General Locations	Activities	Notes
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Open Actions

All open actions

Record ID	Inspection ID	Date	Time	Category/Requirement	State	Notes	Action Required	Responsible Party	Due Date	Follow-up
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Closed Actions

Actions completed between 1/7/2019 and 1/10/2019

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Journal

Journal entries created between 1/7/2019 and 1/10/2019

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117	43	1/9/2019	4:36:02 PM	Clean and organized service area.

## **Appendix C: Contact List**

Contact list provided separately.