BW GOLD LTD
a subsidiary company of Artemis Gold Inc

Blackwater Gold Project

Joint *Mines Act / Environmental Management* Act Permits Application

CHAPTER 8: OCCUPATIONAL HEALTH AND SAFETY PROGRAM

March 2022

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ACRONYMS AND ABBREVIATIONS

Aboriginal Groups or Indigenous nations	Lhoosk'uz Dené Nation, Ulkatcho First Nation, Nadleh Whut'en First Nation, Saik'uz First Nation, Stellat'en First Nation and Nazko First Nation (as defined in the Project's Environmental Assessment Certificate M#19-01)
BC	British Columbia
Blackwater or Project	Blackwater Project or Blackwater Gold Project
BW Gold	BW Gold LTD.
CEO	Chief Operating Officer
CIH	Certified Industrial Hygienist
CM	Construction Manager
Code	Health, Safety and Reclamation Code for Mines in British Columbia
COO	Chief Operating Officer
CSA	Canadian Standards Association
dBA	Decibel
DS	Decision Statement
EAC or Certificate	Environmental Assessment Certificate
EM	Environmental Manager
EMLI	Ministry of Energy, Mines and Low Carbon Innovation
EMPR	Ministry of Energy, Mine and Petroleum Resources
ENV	Ministry of Environment and Climate Change Strategy
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
H&S	Health and Safety
Joint MA/EMA Application or Application	Blackwater Project Joint Application for *Mines Act* and *Environmental Management Act* permits
JOHSC	Joint OHS Committee
KPI	Key performance indicator
LHCP	Licenced Healthcare Professional
LOTO	Lockout/Tagout
LTI	Lost-Time Injury Frequency Rate

m	metre
MAF	Medical Aid Frequency Rate
MERP	Mine Emergency Response Plan
MSD	musculoskeletal disease
Mt	million tonnes
Mtpa	million tonnes per annum
OHS	Occupational Health and Safety
OHSP	Occupational Health and Safety Program
PPE	Personal Protective Equipment
Project	Blackwater Gold Project
QP	Qualified Professional
ROH	Registered Occupational Hygienist
SR	Severity Rate
TRIF	Total Reportable Incident Frequency Rate
WHMIS	Workplace Hazardous Materials Information System

8. HEALTH AND SAFETY

The purpose of the Occupational Health and Safety Program (OHSP) is to provide and maintain a safe and healthy work environment for all persons working at the Blackwater site. A written policy statement on the Project's OHSP will be developed prior to the start of construction. The policy will be in accordance with the *Health, Safety and Reclamation Code for Mines in British Columbia* (Code; Ministry of Energy, Mines and Low Carbon Innovation [EMLI] 2021).

Blackwater Gold places a high priority on the health and safety (H&S) of its employees. A safe work place is a productive workplace. Blackwater employees, visitors, and contractors are responsible for complying with all H&S standards and regulations, including work site inspections and accident/incident investigations.

The safety information within the OHSP Program does not take precedence over applicable legislation. All personnel need to be familiar with the legislation.

8.1 Occupational Health and Safety Program Overview

This OHSP contains the following elements:

- POLICY: Health and safety programs and policies are considered living documents and need to be regularly reviewed and kept up to date. These programs and policies will be implemented by site personnel and possibly contractors.
- MEETINGS AND COMMUNICATION: Regularly scheduled meetings need to be held to discuss health and safety. Regular communication by management to employees concerning Health and Safety performance and confirming management's support of the program.
- RISK ASSESSMENT: Physical and chemical health and safety risks need to be evaluated and controls plans developed throughout the life of mine. These assessments will need to be evaluated and should be commensurate with the activities at the mine site. The processes will cover both routine and non-routine activities.
- KEY HEALTH AND SAFETY PROGRAMS: Key elements of the major health and safety programs are based on a risk assessment. For programs where the current program is applicable to on-site activities, the programs are being followed.
- TRAINING AND STANDARD OPERATING PROCEDURES: Written instructions and training are provided for site personnel and contractors.
- INSPECTIONS: Regular inspection of premises, machinery, tools, equipment, and work practices as well as tracking of performance will be undertaken. Results are communicated internally and externally as a measure of the effectiveness of the program.
- INCIDENT INVESTIGATION: Investigation of incidents will be done in order to take action to prevent similar occurrence.
- INCIDENT REPORTING AND RECORD KEEPING: Health and safety incidents will be reported as required under regulations and records retained to demonstrate that reporting obligations have been met.

8.1.1 Purpose and Objectives

The purpose of the OHSP is to establish the processes and procedures by which BW Gold works to protect workers from undue risks due to site activities. This program is a living document that must be regularly reviewed to address changing conditions and activities at site, including as the operation moves between its different life cycle stages (e.g. exploration, development, operations, reclamation and closure.

The OHSP is focused on identification and implementation of best practices that comply with applicable regulatory requirements, are suitable for the particular application, and which will help prevent health and safety (H&S) incidents. It applies to all facilities associated with the Blackwater mine, including the mine site, Mine Access Road, transmission line, and airstrip and airstrip road. It applies to any mine employee or contractor.

A standalone Chemical and Materials Storage, Transfer and Handling Plan and Cyanide Management Plan are provided in Appendix 9-M of this Application. A standalone Mine Emergency Response Plan (MERP) is provided in Appendix 9-J.

The objectives of the OHSP are to:

- Achieve industry best practice in all aspects relating to safety: Zero Harm;
- Establish workplace safety rules and roles and responsibilities;
- Ensure employees know their rights: The right to know, the right to refuse, and the right to participate in H&S activities;
- Identify mitigate, reduce and revisit all hazards to personnel and equipment;
- Comply with regulatory requirements, corporate commitments and site policies;
- Provide safe and appropriate equipment and conditions for daily operations;
- Train employees to carry out their jobs safely and productively. No employee will be permitted to commence a job without the requisite training;
- Investigate the causes of incidents, and develop effective and immediate preventative and remedial action;
- Develop, maintain and review practices and procedures;
- Minimize losses or injury arising from an incident or unforeseen event through emergency preparedness;
- Monitor, report, and evaluate employee H&S performance; and
- Promote the H&S Policy as a way of life in all aspects of the site.

8.2 Compliance Obligations, Guidance, and Best Management Practices

8.2.1 Legislation

Federal legislation that may be applicable to occupational health and safety (OHS) includes:

- *Canadian Environmental Protection Act, 1999*;
- *Hazardous Products Act*;
- *Hazardous Products Regulation;*
- *Nuclear Safety and Control Act*;
  - *Nuclear Substances and Radiation Devices Regulations*;
  - *Packaging and Transport of Nuclear Substances Regulations*;
  - *Radiation Protection Regulations;*
- *Transportation of Dangerous Goods Act*;
  - *Transportation of Dangerous Goods Regulations*;

Provincial legislation that may be applicable to OHS includes:

- *Building Act*;
  - *British Columbia Building Code Regulation*;
  - *Building Act General Regulation*;
- *Fire Services Act*;
  - *British Columbia Fire Code Regulation*;
- *Industrial Roads Act*;
  - *Vehicular Traffic on Industrial Roads Regulations*;
- *Mines Act*;
  - Health, Safety and Reclamation Code for Mines in British Columbia (Code: EMLI 2021);
- *Passenger Transportation Act*;
  - *Passenger Transportation Regulation*;
- *Public Health Act*;
  - *Industrial Camps Regulation*;
  - *Food Premises Regulation*;
  - *Health Hazards Regulation*;
- *Safety Standards Act*;
  - *Electrical Safety Regulation*;
  - *Gas Safety Regulation*;
  - *Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation*;
  - *Safety Standards General Regulation*;
- *Transport of Dangerous Goods Act*;
  - *Transport of Dangerous Goods Regulation*; and
- *Workers Compensation Act*.

BW Gold will annually review the current and planned activities at the site to confirm the legislation and regulations that are pertinent to operations for auditing purposes.

8.2.2 Environmental Assessment Certificate and Decision Statement Conditions

The Project received Environmental Assessment Certificate #M19-01 (EAC) on June 21, 2019 and a federal Decision Statement (DS) on April 15, 2019. Conditions in the EAC relevant to OHS include Condition 40 which requires the development of a Health and Medical Services Plan to take into account and incorporate the 2015 *Health and Medical Services Plan Best Management Guide for Industrial Camps*, identify plans for drinking water quality monitoring, on-site health and medical protocols and services (disease and infection prevention, health promotion and worker wellness) and communication and coordination with Northern Health, BC Ambulance Services and local health service providers.

There are no conditions in the federal Decision Statement pertaining to OHS.

8.2.3 Guidance and Best Management Practices

Occupational health and safety guidance and best management practices include:

- Work Related Musculoskeletal Disorder Prevention Guide for Mining (BC Ministry of Energy, Mine and Petroleum Resources [EMPR] 2006);
- Towards a Respectful Workplace: A Handbook on preventing and addressing workplace bullying and harassment (WorkSafe BC. 2013);
- Handbook for Joint Health and Safety Committees (WorkSafe BC. 2018);
- Joint Health and Safety Committee – Evaluation Tool (WorkSafe BC 2020);
- Guidance Document – COVID 19 Safety Plans (BC EMPR 2020).
- How to Implement a Formal Occupational Health and Safety Program (WorkSafe BC 2017);
- A Guideline to Reducing Inorganic Lead Exposure in Fire Assay Laboratories. Office of the Chief Inspector of Mines. April 2016; and
- A Guideline for the Use of Perchloric Acid and Perchloric Acid Fume Hoods. Office of the Chief Inspector of Mines. April 2016.

8.3 Roles and Responsibilities

All persons working and visiting the Blackwater mine site have the right to a safe working environment. Everyone shares responsibility for looking out for risk identification and mitigation whilst conducting themselves in a way that will not bring harm to themselves, their colleagues, others or mine property. Each person has a responsibility to prevent incidents and ensure hazards relating to their work area are eliminated or controlled to prevent injuries.

Each and every worker in Canada has three fundamental rights:

- The Right to Know: All employees have a right to know what hazards are present on the job, and how these hazards can affect them.
- The Right to Participate: All employees have a right to take part in H&S activities. The employee also has a right to report unsafe practices and conditions without worrying about reprimand or job loss.
- The Right to Refuse Dangerous Work: All employees can refuse work that is dangerous to themselves or to co-workers. If work is refused, there are specific procedures that must be followed.

Specific roles and responsibilities under this OHSP are described in Table 8.3-1.

Table 8.3-1: 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.

Role	Responsibility
Mine Manager	The Mine Manager, as defined in the *Mines Act* and Code, has overall responsibility for mine operations, including the H&S of workers and the public, Environmental Management System (EMS) implementation, environmental performance and protection, investigations, compliance reporting, provision of Personal Protective Equipment (PPE), review and signing of hazard assessments, inspections, and investigation reports. The Mine Manager may delegate their responsibilities to qualified personnel. Reports to COO.
Construction Manager (CM)	The CM is accountable for ensuring environmental and regulatory commitments/ and obligations are being met during the construction phase. The CM reports to Mine Manager.
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. Supports to CM and reports to Mine Manager.
Health and Safety Manager	The H&S Manager (or delegate) chairs the Joint OHS Committee (JOHSC) and is responsible for the Project's OHSP, including meeting H&S targets, legal compliance, incident prevention and supporting emergency response planning and incident response.
Departmental Managers	Departmental Managers are responsible for implementation of the EMS relevant to their areas. Report to Mine Manager. matters are given consideration in pre- with others carrying out occupational H&S duties and ensure that all incidents and near misses are investigated as promptly as practicable and that corrective action is taken to prevent re-occurrence; and maintain and monitor the approved management programs through audits, periodic reports, inspections and other methods that are part of the OHSP.
Employees and Contractors	Employees are responsible for being aware of permit requirements specific to their roles and responsibilities. Report to departmental managers.
MERP Coordinator	The MERP Coordinator will write the MERP and assist the Mine Manager in implementing and updating the MERP, as required, and provide training.
Mine Emergency Response Team	Mine Emergency Response Team is present on-site and is comprised of personnel with advanced training in spill response techniques. The ERT will ensure they have completed the required training for emergencies and participating in drills.

8.3.1 Conditions of Employment

All employees, visitors, and contractors are responsible for (but not limited to) the following standards:

- Having completed the Mandatory Site Safety and Environment Induction program as part of the initial visit to Blackwater;
- The manager shall not employ any person under the age of 18 years at a mine except for the purpose of training that person;
- Work safely at all times and provide a safe workplace for others;
- Report to work "fit for duty";
- Respect all people with whom you interact on the jobsite and company property;
- Comply with all legislative requirements;

- Engage in positive reinforcement towards safety awareness with every other person on the project;
- No person shall engage in any improper or foolhardy behavior, such as horseplay, fighting, playing practical jokes or any other conduct that might create a hazard to themselves or other workers;
- Consumption or possession of alcohol or illicit drugs on company premises is prohibited; smoking is allowed in designated areas only;
- Prescription medication use must be reported to the health advisor/nurse and employee's supervisor; with details to be kept on record;
- Theft, vandalism or any other abuse or misuse of company or other site personnel property is prohibited;
- All incidents that result in damage or injury are to be reported immediately to management; this includes 'near miss' incidents;
- First aid treatment is to be obtained promptly for any injury;
- Appropriate Personal Protective Equipment (PPE) is to be worn at all times on all worksites;
- All work shall be carried out in accordance with appropriate safe work procedures and supervisor instructions;
- Use the appropriate tool or equipment for the job to be undertaken and use only tools that are in good repair, with all guards and safety devices in place;
- Obey all posted warning signs and warning barriers;
- Only authorized persons are permitted to perform maintenance and repairs, and only trained personnel are allowed to operate vehicles or equipment;
- Inspect your work area and equipment before commencing work, and immediately correct any unsafe conditions; eliminate the hazard for yourself and others;
- Always follow the site Lockout Procedure; no personnel except the supervisor shall remove someone else's lockout or tag, in strict adherence to the defined Lock-out Procedure Rules;
- No personnel shall, render ineffective any device, equipment, or material provided for the protection of the H&S of persons;
- Unrestrained long hair, loose clothing and jewelry (including rings) are not permitted when operating equipment. Sleeved shirts are mandatory in the process plant; and
- No person shall enter, remain or be knowingly permitted to enter or remain at any area of operations, if in the opinion of the supervisor his/her ability is impaired so as to endanger his/her H&S or that of another person.

8.4 Management Meetings and Communication

Communication of OHSP, policies, performance, risks and changes will occur through a number of means including communication of the OHSP, coordination JOHSC, regular OHS meetings, risk assessment process, training etc.

8.4.1 Occupational Health and Safety Policy

An OHS Policy will be posted throughout the workplace where employees will be able to view the policy and it will be reviewed at least annually with the JOHSC and senior management. In reviewing the policy

and program, performance of the site with respect to any established key performance indicators (KPIs), including injury data will be assessed and updated as needed.

8.4.2 Joint Occupational Health and Safety Committee (JOHSC)

The Mine Manager will establish a JOHSC when the workplace regularly employs more than 20 workers. This committee will be established prior to the commencement of construction. This Committee will consist of equal number of management and non-management employees. Two co-chairs will provide leadership of the committee, one from management and one selected by the non-management employee representatives.

Ideally, each department will be represented on the committee and this will be established based on shift/ schedule and availability; alternate members will be selected to represent employees as required. Worker representatives will be selected from workers who do not exercise managerial functions and will be selected by secret ballot by the workers. If workers do not make a selection the Mine Manager will assign this role.

Once the committee is selected, two members, one from the worker representatives and one from the employer representatives will be selected as co-chairs.

The first order of business for the committee will be to establish their rules of procedure. See the Handbook for Joint Health and Safety Committees (WorkSafe BC 2018) for developing the JOHSC Committee.

The names and work locations of JOHSC members will be posted at the workplace. The JOHSC will have the full support of BW Gold's Senior Management team, and will:

- Hold weekly and monthly meetings and conduct safety inspection tours;
- Participate in dangerous occurrence and serious incident investigations;
- Review the OHSP;
- Assist management in the development and implementation of safe work practices and emergency procedures;
- Review reports, materials and matters related to OHSP;
- Address questions or concerns brought directly to management;
- Recommend actions to management members who have the authority to make the changes;
- Conduct workplace audits for musculoskeletal disorders (MSD) and repetitive strain injury (RSI) exposures;
- Participate in supplied training for the functions of their duties;
- Participate in resolving work refusals; and
- Participate in releasing the scene of a dangerous occurrence.

Minutes will be recorded during each JOHSC meeting. The minutes will be signed by the committee co-chairpersons or designates, and a copy will be:

- Filed with the Mine Manager;
- Displayed on noticeboards at the mine until replaced by the minutes of the next meeting; and
- Made available to an inspector on request.

8.4.3 Weekly Crew Safety Meetings

Each Supervisor is responsible for holding a weekly safety meeting with his/her crew.

The topics of this meeting should be relevant to the work area, current conditions and will include any new policies or procedures as they are created.

The Supervisor will take attendance and minutes of each meeting and forward to the H&S Manager. A standard form will be created for this purpose.

8.4.4 Pre-shift Communication

Prior to workers going to their workplace, each Supervisor will have pre-shift communication with all members of their crew. This will provide him/her the opportunity to ensure that each employee is “Fit for Duty”. Included in this meeting are identification of any new or changing hazards in the workplace, special tasks that will be required that shift, and any preventative measures that may be required.

8.4.5 Job-specific Planning

During a shift, an employee may be required to perform a non-routine task. This task must be looked at from a safety perspective prior to starting. If it is complex, a written job-hazard analysis may be conducted with the help of a member of the JOHSC and/ or H&S Manager. If it is a less complex job, the Supervisor will have a conversation with the employee to ensure they understand the methodology of completing the task and the potential risks to mitigate.

8.5 Risk Assessment Processes

Throughout the life of mine having robust processes to identify hazards, assess their risks and determine the needed controls to mitigate those risk is essential to protecting workers. Risk assessment will include routine and non-routine activities, activities of visitors and contractors on site; human factors (including behavior and capabilities; infrastructure, and equipment and materials at the workplace, including the design of work areas, processes, installations, machinery, and operating procedures.

8.5.1 Preliminary Occupational Health and Safety Risk Assessment

At the current stage of the Project design, a detailed OHS assessment is not yet possible, as details of how work will occur, how materials will be processed etc. are not confirmed. Despite limited information currently available, some key risks that will be present throughout the life of the mine are known, including potential chemical or physical hazards that will be present and risk control strategy that will be implemented to manage those risks.

A summary of the preliminary OHS risk assessment is included in Appendix 8-A, although with expected risk reduction measures.

8.5.2 Occupational Health Risk Assessment

As additional details become available and the site prepares to begin construction an OHS risk assessment will further develop the preliminary risk assessment. This process will be on-going throughout the life of mine as the mine operations change and evolve. This assessment will be completed by a qualified person in the field of occupational hygiene (Certified [CIH] or Registered Occupational Hygienist [ROH]). The CIH or ROH will review design and process data and evaluate the expected effectiveness of the planned engineer controls.

A key component to preventing incidents is to recognize a potential hazard and apply corrective actions before they occur. Risk control measure are then applied following the “Hierarchy of Controls” model, shown below in Figure 8.5-1 Hierarchy of Controls Model.

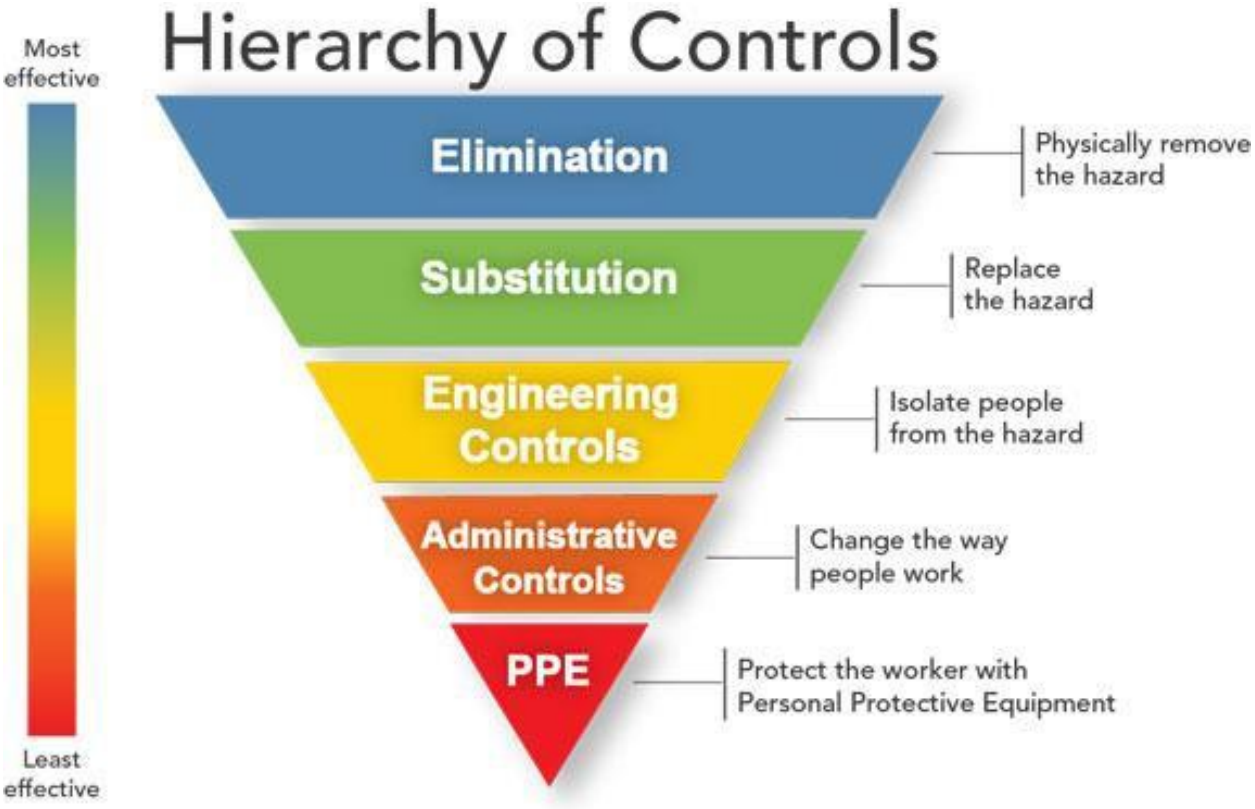

Figure 8.5-1: Hierarchy of Controls Model

The CIH or ROH can then make suggestions such as substitutions or engineering controls to reduce exposure.

Additional controls may be recommended, such as developing and implementing monitoring program for specific chemical hazards. Some substances may trigger the requirement to develop an Exposure Control Plan, which will detail the engineering and monitoring program, alarms and a medical surveillance program as necessary to confirm the program is effective.

Additional administrative controls may include Standard Operating Procedures (SOPs), which are created to assist in presenting potential hazards and supplying a methodology for completing a task in a safe manner.

Training programs may also be developed to ensure that the employee has the knowledge to complete a task in a safe and healthy manner.

Communication between the supervisor and the employee is required to ensure that all hazards are identified and the employee is comfortable in their knowledge and understands the task to be completed.

8.5.3 MSD Risk Assessment

BW Gold will ensure risk assessments are completed when new tasks, processes or machinery are introduced. By using systematic engineering principles BW Gold will identify and eliminate hazards during the design, installation, commissioning of the site. The goal of workplace design is to relate the physical

characteristics and capabilities of the worker to the design of the equipment being used and the layout of the workplace. The process of safety in design will be used to ensure potential hazards in the design stage are identified and appropriate control measures are implemented to eliminate these hazards, and/or lower them to an acceptable status of as low as reasonably practicable.

Repetition will be assessed based on work cycles. A work cycle is the duration from the time a task starts, to the time of completion. During this cycle, physical activities must be reviewed for risk. Physical activities are analyzed for the following:

- Force intensity;
- Frequency;
- Duration; and
- Posture demands.

The factors noted above must be assessed by body parts affected (wrist, elbow, back, knee, shoulder).

Efforts will be made to purchase and procure tools that promote good ergonomics. Examples of these include:

- Pistol type tools for vertical positions or overhead positions.
- Straight type handles for horizontal at or above elbow height.

Tools should be selected that fit the hand properly without pinching compression points. Counter balancing with tool suspension cable should be used if the tool is heavy and/or used frequently at one location.

8.5.3.1 Job Hazard Analysis

The Job Hazard Analysis (JHA) is the hazard identification, risk assessment and mitigation tool used for all non-routine work, for which no SOP has been developed and a potential for injury or incident exists. The JHA is jointly prepared by supervisors, JOHSC members, and employees, often with input from the H&S Manager and/or Environmental Departments to ensure the proposed work will adhere to all regulatory and other requirements. Contractors will be involved in the JHA development process if they are involved with the work being conducted. The JHA is the foundation for a formal written SOP and a copy will be filed within the relevant department and a copy provided to the H&S department. Training for this assessment tool will provided during initial site orientation.

All work carried out on site shall be performed in accordance with a SOP or a JHA.

All contractor SOPs and JHAs or equivalent will be signed off by the relevant contractor Supervisor and available for review by the BW Gold Project Manager and CM prior to any work commencing on site.

Should the work task change the work shall cease and the JHA shall be amended highlighting any new hazards as identified, and the control measures put in place to mitigate those hazards identified.

The BW Gold Project Manager and/or CM will review the amended JHA.

8.5.4 5-Point Safety System

BW Gold is proposing to use a 5-Point Safety System for pre-task risk assessment on all jobs. The principles are listed below.

1. Check entrances and travel ways to my place of work;
2. Ensure that my workplace and equipment is in safe condition;

3. Work safely;
4. Do an act of safety; and
5. Continue to work safely.

Points one through three are done by the employee, and verified by the supervisor upon arrival to the workplace. The fourth step is safety discussion between the employee and the supervisor, while the fifth is a verification by the employee that he or she has the correct training, experience, and motivation to continue working safely. This is also verified by the supervisor prior to his or her leaving the workplace.

The basic process is:

- STOP – take a look around;
- REVIEW – the task;
- ASSESS – identify hazards and evaluate;
- MANAGE – control the hazards; and
- SAFELY – complete the task.

8.6 Key Health and Safety Programs

The following key H&S programs will need to be fully implemented as the site moves into construction, and then operation. The programs listed below are based on the know controls needed from the preliminary OHS risk assessment. As the mine design develops and changes occur to onsite operation additional programs will be identified as needed and developed where required.

8.6.1 Prevention of Harassment and Violence

Everyone is entitled to work in an environment free from harassment (of any form) and threats of violence.

This includes the use of photos, literature or other materials that may cause offence to groups or individual employees, contractors or visitors.

An individual who feels threatened or harassed should report the incident to their Supervisor or H&S Manager so that a confidential investigation can be completed.

8.6.2 Fitness for Work

Fitness for Work is defined as *"a physical, mental and emotional state which enables employees to perform their job tasks competently and continuously in a manner which does not compromise the integrity of the BW Gold or create a safety hazard to themselves or others."*

All BW Gold employees must be fit for work at all times during work. Employees cannot be impaired and must be fit for duty when they commence work and anytime during their work including returning from breaks.

Impairing substances or conditions affect individuals differently. Employees must be aware of how substances or conditions affect them specifically, including being aware of how long the effects of an impairing substance or condition may last for them, so they are not impaired while working. This includes ensuring that substances used during off work hours do not have any impairing effects while at work.

Impairment in the workplace can affect workplace health, safety and operations and can come from many different sources, including:

- Prescription drugs;

- Medications and over the counter drugs;
- Alcohol;
- Cannabis;
- Medical conditions;
- Illicit drugs; and
- Fatigue.

No person will possess intoxicating liquor, cannabis, or illegal drugs in or about the mine.

8.6.3 Working Alone

This policy is designed to provide direction with regards to employees working alone or in isolation from other workers, or have limited access to emergency response personnel. Through this policy, BW Gold intends to eliminate the risk to employees working alone and comply with OHS legislation.

General Requirements for Working Alone:

- BW Gold workers on a project will have project assigned radios that are required to be on each person or work team at all times. Workers will not be permitted to work without radio communication.
- Working alone will only be permitted where all other reasonable and practicable options have been exhausted. Working alone is a last resort and BW Gold will always strive to pair up teams of workers to eliminate the risk associated with work in isolation. The risk assessment process must be completed prior to consideration of a member working alone.
- In the event, that through the course of employment, a worker is required to work in isolation or work in an area or location where emergency services are limited the following steps will be taken to eliminate the risks associated with the task:
    - **Conduct a Hazard Assessment** – Based on a 5 point safety system card, the worker and supervisor will examine the existing or potential safety hazards associated with the work to be performed.
    - **Eliminate and Reduce Risks** - Workers and supervisors involved in the hazard assessment will take steps to eliminate the hazards identified or implement procedures to reduce the degree of risk identified.
    - **Establish an Effective Means of Communication** - Supervisors will have a communication system for employees to contact other workers who can respond to the employee's need. The system will be appropriate to the hazard involved. If electronic communication is not practicable or readily available at the work site, the employer must ensure that the employer or another competent worker visits the worker, or the worker contacts the employer or another competent worker. Contacts with the worker must be established in writing and must be at intervals of time appropriate to the nature of the hazards associated with the worker's work, but should not exceed 2.5 hours. When a worker is working alone and may not be able to secure assistance in the event of an injury or other misfortune, the manager shall ensure that a means exists to check the well-being of the worker and the time between checks does not exceed 2.5 hours, unless a risk assessment identifies more frequent checks.
    - **Ensure Employees are Trained and Educated** - Through the hazard assessment, workers involved in the work and those who would be contacted in the event of an incident will be advised of all hazards associated with the work and in emergency response procedures.

To comply with the policy for working alone and workplace health and safety regulations, all individuals working for BW Gold shall follow the working alone procedure. Adherence to this working alone procedure will help to ensure that the appropriate steps have been taken to prevent incidents and accidents. In the event that there is no communication available, workers are to stop work and establish communication before proceeding.

8.6.4 Confined Space Entry

The purpose of this policy is to ensure that all BW Gold's workers are aware of and are familiar with legislation for confined spaces. Currently there are no confined spaces on site, however, as the site moves to construction and operation the likelihood that confined spaces are present on site increases. To ensure the health and safety of our employees, BW Gold will provide effective safety measures to protect all persons required to work in and around all confined spaces.

A confined space is an enclosed or partially enclosed area that is big enough for a worker to enter. The space may be enclosed on all sides (for example, a bin or tank), or as few as two sides (for example, an enclosed conveyor). Confined spaces are not designed for someone to work in regularly. They are places where entry may be needed from time to time for inspection, cleaning, maintenance, or repair.

An inventory of confined spaces will be maintained, each confined space is signed and secured from entry, where practicable, and each person who is assigned duties or responsibilities related to entry into a confined space is adequately instructed and trained in confined space entry. A procedure for working in confined spaces will be developed and implemented with the JOHSC. The procedure will detail the responsibilities of the persons involved in confined space work, the permit issuance process, the equipment to be used in such conditions, and the communication process.

8.6.5 Energy Isolation

BW Gold shall ensure that when machinery is shut down for servicing, repairs, tests or adjustments the equipment will be locked and tagged out. Equipment that is to be isolated must be locked out.

All persons about to perform work on any piece of equipment must ensure that all sources of energy or other hazards (motion, pressure, toxicity, etc.) are removed, locked out, tagged and deemed to be safe by the person(s) about to perform the work. Each worker will use his own lock and keep the key on their persons at all times while the equipment is to be locked out. Equipment cannot be re-energized without the involvement of the person(s) or discipline that locked it out and cannot be locked out in a way that readily allows any other person to disable the lockout.

No person shall remove a lockout device or tag except:

- The worker who installed it; or
- In an emergency or where the worker who installed it is not available, a competent worker, designated by the employer, and who has first ensured that no workers will be endangered by the removal.

Before the work commences the worker must double-check the lockout. For electrical equipment, ensure that the on/off switch will not operate before the work commences. Upon completion of the work and before the equipment is re-energized, the person(s) who locked out the equipment ensures that putting the equipment into service will not endanger anyone. No work may commence on machinery that is in operation unless it is properly locked out, tagged and all safe guards are in place to ensure no injuries can occur.

BW Gold places a high priority upon the safety and well-being of all employees. To further our efforts to protect employees from harm the following policy has been established:

All power equipment shall be completely isolated from all power during servicing and maintenance. In the event that work must be completed live a risk assessment must be completed and approved by the H&S Manager and the JOSHC.

8.6.5.1 Energy Control Procedure

The following rules are mandatory, and apply to all personnel during construction regardless of discipline. Improper use of, or non-compliance with, this procedure will result in disciplinary action up to and including removal from the worksite.

- All lockout devices shall be individually keyed. Only one key per lock is permitted. No master key or keyed-alike locks are allowed. The authorized worker will maintain control of the key (for any single keyed lock he/she applies).
- All equipment and systems shall be locked out and tagged out, to protect against accidental or inadvertent operation or energization, when such operation could cause injury to personnel or damage to equipment.
- Only authorized individuals will conduct or participate in energy isolation procedures.
- Where complex lockout occur with multiple people they will follow the procedure to be established group, complex lockout procedures.
- Trucks with dump boxes shall be equipped with a permanently attached device for securing or locking the box in a raised position, or carry suitable equipment on board for this purpose.
- Personal locks will be tagged with the authorized individuals tag that includes their name, type of work, their supervisor and date the work was started.
- No person shall place himself/herself beneath the raised box of a dump truck, bulldozer blade, scraper blade, loader bucket or similar equipment unless it is securely and adequately blocked or otherwise secured independently of the normal operating controls.

8.6.5.2 General Requirement

Affected personnel shall follow this energy control procedure before performing tasks on equipment and/or systems where the unexpected energization, start-up, or release of hazardous energy could occur and cause injury or damage. The equipment and/or systems shall be isolated and rendered inoperative.

There is a method of control for hazardous energy using Hierarchy of Controls, for example:

- Remove people and activity away from source of hazardous energy.
- Use solid physical barrier to isolate people and activity from hazardous energy.
- Use Lockout/Tagout (LOTO) system, circuit breaker, and valves or other valid means to provide isolation for hazardous energy.

8.6.5.3 Specific Responsibilities

It is the responsibility of the person servicing or maintaining the equipment to place a personal lock and tag on the machine in accordance with the policy and procedures.

Servicing and/or maintenance include constructing, installing, and setting up, adjusting, inspecting, modifying and maintaining machines or equipment. These activities include lubrication, cleaning, un-jamming, and making adjustments or tool changes, where the employee may be exposed to the unexpected energizing or start-up of the equipment, or release of hazardous energy.

8.6.5.4 Restoring Machinery to Normal Operation

After the servicing or maintenance is complete and the machinery is ready for normal operation, conduct a check of the area to ensure that:

1. Nobody is in an area of operation where they could be injured by the machinery or material during operation.
2. Tools and other equipment have been removed.
3. Safeguards have been properly reinstalled.

After all tools have been removed, guards have been reinstalled and people have been notified and are all clear, all locks and tags must be removed by the individuals who installed them. Start-test the equipment, operating the switches, valves, etc., to restore energy to the machine.

Blocking may need to be removed before operating the machinery.

8.6.5.5 Energy Control Lockout/Tagout Procedure

A Construction lockout / tagout policy will be developed in consultation with project contractors. The site H&S Manager will confirm with contractors that their policies conform with the site lockout / tagout policy As the Project moves into commissioning however, a more detailed Operations Energy Isolation Procedure will be developed, which includes but, is limited to, the requirements of section 4.9.15 and sections 4.11.2 to 4.11.7 inclusive of the Code:

1. An authorized management representative must be appointed to be responsible for the overall worksite. The machine or process will be initially locked out by the affected employees and the equipment operator. These individuals are required to use a check off list of all lockout / tagout points.
2. There must be written procedures for the shutdown and lockout of the machine / process. This must be followed during each lockout.
3. Notify all affected employees that a lockout or tagout procedure is going to be utilized and the reason. The senior management appointee will know the magnitude of energy that the machine utilizes and will understand the hazards.
4. If the machinery is operating, shut it down by the normal stopping procedure: at the control panel / at the last in line valve / and or other controls as necessary.
5. Operate the main switch, valve or other energy isolation device (s) to isolate equipment from its energy source.
6. Place a lock or tag on the energy isolation device (switch, valve, etc.), or implement other procedures to effect energy isolation.
7. A tag may be used only if a lock cannot be used because of the design of the energy isolating devise. Each person who works on machinery or equipment requiring to be locked out shall be responsible for affixing his/her own lock and tag to the lockout device and for removing them on the completion of his/her work. The must include:
    - Tags shall be attached to every lock, spade, and blind, and be clearly and legibly printed upon in permanent black ink. It shall include:
        a. Name and telephone number of the authorized worker’s supervisor.
        b. Name of the authorized worker’s organization.
        c. Printed name and signature of the person who installed the lock.

d. Date and time the tag was placed.

e. Reason for lockout.

In the event that the machinery or equipment cannot be locked out, a tag shall be affixed and a watchman shall be posted at a location where he/she can prevent anyone from re-energizing the power supply and starting the machinery or equipment. The watchman shall have no other duties at the time and he/she shall remain at his/her post until told by the supervisor that he/she may leave.

8. Dissipate or restrain any residual energy which may be stored within the machinery:

- Bleed hydraulic or air pressure out of the system after pumps have been shutoff and their energy sources isolated.
- Stop turning flywheels.
- Release spring tensions.
- Block otherwise restrained elevated object or any other objects that could move on their own, and/or reposition objects that can be placed in a safe position. (These procedures must specifically address all energy sources.)
- Ensure that no personnel are in the machine operating area and start-test the equipment by implementing the normal starting and operating procedures. Check to ensure the machine will not operate and that all residual energy has been controlled.
- Caution: Return operating control to the neutral position after the test.
- Perform the work that needs to be done.

8.6.6 Electrical Safety

The aim of the electrical safety program is to protect workers from injuries whom may be exposed to live electrical systems. All electrical apparatus, equipment and circuits provided on site will be designed, installed, maintained and operated in accordance with Canadian Electrical Code and CSA Standard M421 Use of Electricity in Mines. In addition the following precautions will be employed when working with electrical equipment:

- As noted above, where possible live electrical work shall be avoided. Where necessary the work will not continue without a Safe Work Procedure, appropriate PPE, a live electrical work permit, training and emergency Response Plan.
- When working on connections, shut off power.
- Ensure what amperage and voltage you are working on.
- BW Gold shall ensure electrical installations are carried out by a properly trained and qualified journeyman or registered apprentices.
- BW Gold will require two or more journeyman work together on any energized circuit with a potential of 480 volts or more between conductors.
- Remove panel covers with care, ensuring cover screws or panel space fillers are removed.
- Ensure ladders are made of non-conductive materials.

8.6.6.1 Overhead Power Lines

The following procedures are followed when planning and performing work near overhead power lines:

- Advanced planning for work will include review of site locations to identify any overhead utility lines or other potential hazards in the vicinity of the work locations or transport routes. A hazard assessment must be conducted (e.g., JHA) and work must be planned, as far as is practical, to avoid close proximity to the overhead lines and accidental contact.
- Planning will also include review of site locations with the right of way owners to identify areas potentially traversed by utilities (sewer, telephone, electrical, water, fuel) or other underground locations.
- All designated crossings (right of ways) shall be marked with approved warning signs for high voltage. Equipment operators and users shall obey the safe limit of approach distances. No one shall be allowed to touch the load or any part of the equipment when work is being done adjacent to or within the safe limit of approach distances until a designated spotter indicates it is safe to do so.
- Except in emergencies and for critical tasks, work near power lines shall be performed during daylight hours only. Work shall not be conducted in close proximity to overhead power lines during rainy or stormy weather.
- Work shall not occur within the Limits of Approach:
    - 15 meters (50 feet) of overhead lines suspended from steel towers in any direction;
    - 10 meters (33 feet) of overhead lines supported on poles in any direction; and
    - If uncertain on the safe distance, check with the utility provider for location and appropriate clearances given the voltages.
- When working near overhead power lines, workers must install a minimum of two “Danger Overhead Line” signs. The signs shall be installed on both sides of the line at a distance of 7 meters from the center of the line.
- Where overhead power transmission lines exist or are adjacent to work areas, the supervisor responsible for the work will provide information in the JHA describing the controls to be used to prevent contact with the overhead lines.
- Equipment operators and spotters shall be constantly aware of the position of their equipment in relation to overhead power lines and associated limit of approach.
- Workers not directly involved in the work being performed shall be kept at least 30 meters (about 100 feet) away from equipment when it is being used near overhead power lines.

8.6.7 Working at Heights

The Mine Code requires workers to use fall protection systems when they could fall from a height of 3 m (10 ft.) or more, or where a fall from a lesser height could result in serious injury.

As the site develops BW Gold’s JOHSC shall evaluate all elevated work for fall exposures and shall pre-plan and install required Fall Protection systems prior to assigning the work to employees. Fall clearances shall be considered when selecting Fall Protection systems, i.e., Use of retractable lifelines may be the most effective and preferred method available.

A Fall Protection plan shall be developed and in place prior to using Fall Protection equipment.

The Fall Protection plan must be available at the work location where the specific work activity is being completed and formally reviewed with the workers before work begins.

As a minimum, a safety harness and a shock absorbing lanyard shall be worn and used when exposed to fall hazards. Personnel required to wear Personal Fall Arrest equipment will wear no less than a Class III full-body harness with a deceleration device (such as a shock-absorbing lanyard or inertia reel).

BW Gold's workers must complete training specific to the equipment used and include procedures to assemble, maintain, inspect, use and disassemble the Fall Protection system or systems.

A JHA, as appropriate will be developed by workers assigned work in elevated areas. Supervisors must analyze all elevated tasks as to Fall Protection needs to ensure adequate Fall Protection systems are provided. After analyzing the tasks, supervisors shall instruct personnel involved in the specifics of the Fall Protection measures to be used.

BW Gold's personnel traveling or working in elevated areas more than 3 m (10 ft.) above ground level or adjacent surface where a fall exposure exists shall secure their safety lanyard at all times to a structure, lifeline, or approved fall arresting device capable of supporting 2268 kg / 5000 pounds.

BW Gold's personnel working from or traveling in aerial work platforms or personnel lifting/hoisting devices shall properly secure their safety lanyards to engineered tie off points at all times, even when traveling below 3 m (10 ft.) from grade. Best practice is to incorporate a self-retracting device to the anchor point on the aerial work platform or similar piece of mobile equipment, in order that we may use travel restraint.

Fall Protection devices such as lifelines, safety harnesses/lanyards, etc. shall be inspected for damage and/or deterioration prior to use. Defective equipment shall be removed from service, tagged and destroyed or returned to the tool crib.

Fall Protection devices subjected to shock loading imposed during fall arresting shall be removed from service and destroyed.

Fall Protection devices and systems shall not be used for any other purpose other than personnel safeguarding.

In situations where a fall could result in impalement or other injury (i.e., working over a hot process, operating equipment), Fall Protection equipment shall be utilized regardless of the potential falling distance. All potentially impaling objects such as rebar shall have the ends capped which adequately covers the impaling end of the object. Similar protective measures must also be applied where workers are exposed to protruding objects such as valve stems, etc.

Access ways, such as ladders, shall be provided for personnel to use to work in elevated areas.

BW Gold's personnel who are observed not utilizing Fall Protection equipment, when required, will be identified, and the appropriate supervisor will be notified. An immediate investigation will take place and reviewed by the H&S Manager and Human Resources, where appropriate disciplinary action will be determined.

BW Gold's personnel must use the full body harness lanyard system. Safety belts are prohibited.

Prompt rescue of workers who fall, or a means for workers to rescue themselves, must be provided.

Fall Protection equipment such as harnesses and lanyards must be hung up or placed loosely in a clean, dry area when storing.

A Fall Protection plan is in place prior to working at height and emergency response procedures have been tested with drills to ensure effectiveness.

8.6.8 Ergonomics/Musculoskeletal Disease Prevention (MSD)

As noted in Section 8.4.3, workplace design will be used to reduce the risk of MSD or injury. Additionally administrative procedures below will be implemented as the site moves into construction and operation to further reduce ergonomic risks. The following information will assist and provide direction into the appropriate selection of controls to safely manually handle material.

Where possible the amount and type of manual handling that workers must do should be reduced. By doing so, workers and employers may experience a reduction in the number of worker injuries (fewer sprains, strains, and back injuries), increases in efficiency and productivity and fewer product losses through damage. BW Gold will provide, where reasonably practicable, appropriate equipment that will help workers lift, lower, push, pull, carry, handle or transport heavy or awkward loads.

All workers are required to participate in the daily stretch routine at the start of their work shift. All workers are required to conduct a risk assessment before a worker manually lifts, lowers, pushes, pulls, carries, handles or transports a load that could result in injuries to the worker. Workers are required to prepare their body for lifts following a Daily Stretching Guide. See example in Figure 8.5-2 below:

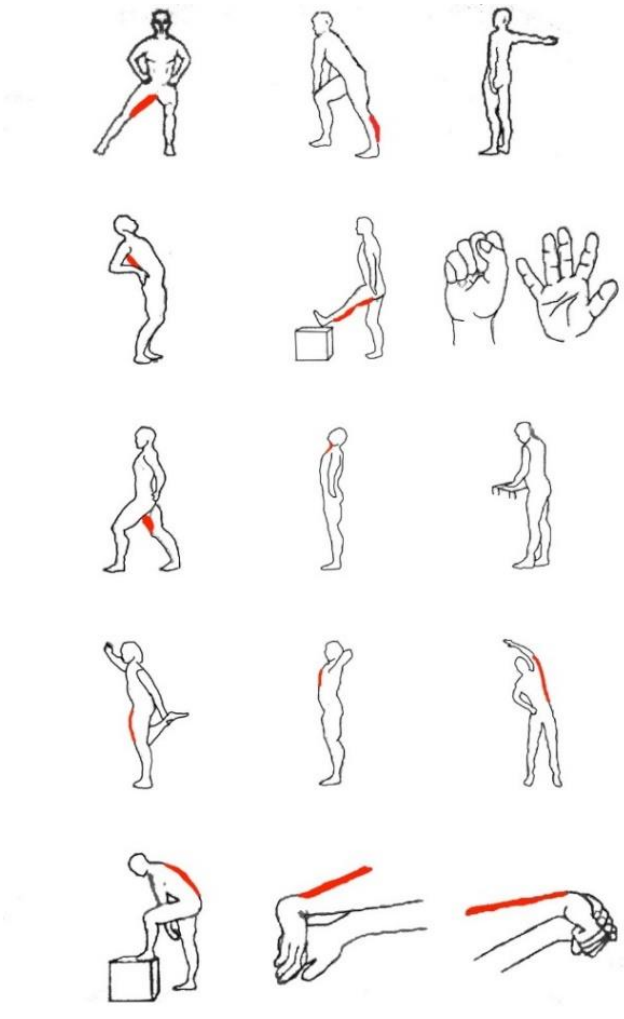

Figure 8.5-2: Daily Stretching Guide

All offices will be set up ergonomically with tripping hazards eliminated. Ergonomic issues will be evaluated by the occupational health resource in both the construction and office environments.

Work practice solutions can be applied by:

- Ensuring worker is following proper procedure.
- Creating a conditioning program for new and reassigned employees.
- Providing training in the recognition of MSD hazards and work techniques that decrease exposure to injury.
- Ensuring workers are wearing personal protective equipment:
    - Example: Train workers how to properly adjust seats in heavy mobile equipment. By teaching them how to use the adjustment features of a seat, it is more likely they will use them. If the worker feels comfortable adjusting the seat, it may make the work day more comfortable for the worker, as well as reduce the risk of certain MSDs pertaining to the back.

8.6.8.1 Manual Lifting

No worker is permitted to lift or carry more than 40 lbs. (18.1 kg) without assistance. This only occurs under ideal circumstances with good posture, positioning and grip. Any workers that are at risk of sustaining injury from things like chronic back problems or past hernias will further reduce this in accordance with their restriction or awkward dimensions of the load.

Workers will observe the following principles of manual lifting:

- Keep the load close – reducing the lever arm of the lift reduces disc compression forces on the spine.
- During the lift – maintain the back in neutral position – this is called locking the back. Maintaining the spine in a neutral position requires contraction of the trunk muscles that help stabilize the lumbar spine.
- Use the legs to lift and not the back. Lifting from the knee bent position with the back locked in neutral is essential. No one should ever lift by bending or flexing at the waist with the legs straight. The disc pressures and extensive trunk muscles cannot stabilize the lumbar spine in such a lift.
- Tighten the abdominal muscles during the lift – this will help further stabilize the lumbar.
- Lift slowly and smoothly – the slower and smoother the lift the better muscle control. There is also a less spike in disc pressure when the lift is performed slowly as opposed to jerking.
- Avoid twisting while lifting – most lifting injuries occur when the trunk is flexed and twisted. Further to that, when the trunk is flexed; both back and abdominal muscle strength is diminished.

Carrying materials creates similar risk to lifting where it loads the spine and relates to disc compression. The risk increases while climbing stairs or travelling greater distances. Risks that are typically associated with carrying include:

- High energy expenditure and related accelerated fatigue.
- Asymmetrical stress on the body when carrying with one hand.
- Strain on shoulders, arms and back.
- Increased strain on cardiovascular system, especially when climbing stairs or inclines. (Combination of using arms and legs while climbing elevates blood pressure).

During task planning, all efforts to reduce manual carrying must be made. Tools and equipment that may be considered are as follows:

- Carts (motorized or hand);
- Lever to lift and transport heavy objects;
- Specialized hand truck for moving spooled wire;
- Wheeled dolly for awkward access;
- Pallet jacks;
- Trailers;
- Tele handlers;
- Tool/material bags with hoist lines;
- Belts/rollers (multi directional);
- Elevators/hoists;
- Pulley system;
- Drum lifter for pouring liquids;
- Rotating pallet holder; and
- Magnetic handles for carrying sheet metal.

8.6.8.2 Pushing and Pulling

Pushing and pulling material has less risk associated with it than lifting or carrying. The following must be observed while pushing or pulling.

- Pushing is safer than pulling.
- Where the worker is standing with the hands pushing or pulling between the waist and shoulders, the recommended safe weight is typically 23kg (50.6 lbs.). Upper body strength and physical condition of workers varies and weight must be taken into consideration before pushing or pulling.
- It is preferable to push from waist height and pull from knuckle height.
- Floor and surface should have the highest coefficient as possible (efforts must be in place to prevent slipping).

Manual pushing/pulling must be engineered out where possible. The use of pallet jacks, carts or some other mechanical means must be assessed.

The weight being pushed or pulled in carts must not exceed physical capabilities of the worker. Wheels of carts must be kept lubricated and clean. Travel paths must be clear and as even as reasonably practicable.

Push/pull forces required to handle valves can be reduced by lubricating the valve and/or increasing the length of valve wrench for better leverage. Where possible, the client's supervisor will inquire with the owner about motor operated valves (MOV) where practicable.

Optimal access to valves is essential to ensure foot positioning. The use of platforms/scaffold may be required to permit the worker to handle the valve in optimum body positioning.

8.6.8.3 Tools and Field Posture

Supervisors must ensure that while workers are using tools or equipment that the working surface enables the workers to operate the equipment at optimum height to eliminate the necessity of working in an awkward posture.

Working overhead (reaching over shoulder) and below knuckle height must be reduced where possible. Efforts will be made to raise or lower the working surface to facilitate good positioning. Where the working surface cannot be lowered, efforts must be made to move the work.

Where the worker is required to kneel or squat, kneeling is preferable. Knee pads or other reasonable means to protect the workers knees must be used.

8.6.8.4 Investigations

If a worker reports to the employer what the worker believes to be work related symptoms of an MSI, the employer must review the activities of the worker to identify work related causes of the symptoms, if any.

8.6.9 Lifting and Rigging

Rigging activities shall be done in accordance with applicable legislative, other jurisdictional requirements and the requirements outlined in this document.

Rigging operations performed by contract workers shall verify that their rigging procedures meet or exceed the requirements outlined in this document.

The safe working limits (SWL) of rigging shall be based on a 5 to 1 design factor on ultimate strength. All rigging components used for hoisting personnel shall be based on a 10 to 1 design factor on ultimate strength.

Working loads on rigging shall not exceed the safe limits established by the manufacturer.

A site specific “lifting Register” will be maintained at Blackwater. This register will have all lifting equipment, SWL, and the corresponding test certificates appended, along with the next subsequent test date and prescribed methodology. This register is reviewed quarterly at Blackwater as a minimum or whenever new lifting inventory has been purchased or added to the site equipment inventory.

8.6.9.1 Lifting Lugs

Lifting lugs or rigging attachment points shall be engineered or certified by the manufacturer.

Lifting lugs, attachment devices and their associated welds forming part of previously installed facility components shall be inspected to confirm integrity using NDT methods as determined by the competent mechanical inspector/examiner performing or overseeing the inspection.

A lifting lug or rigging attachment point that has a documented record of passing an integrity inspection is approved for hoisting for a period of one year from when the inspection was completed and shall be visually inspected each time it is used for any deficiencies of the lifting lug, attachment point and associated welds.

Approved rigging charts and manufacturer’s guidelines shall always be used to determine the equipment capacity. At a minimum:

- The hook of the hoisting and rigging equipment shall be connected above the center of gravity of the load unless additional load control measures are employed.
- Hoisting equipment shall not be side loaded.

- All wire rope and metal mesh slings shall be proof tested and documented to a minimum of two times the single-leg vertical hitch rated capacity prior to initial use.
- All rigging components shall be visually inspected before every use.
- Any rigging component that is suspected of being damaged, overloaded, shock loaded, abused, or modified shall be tagged and removed from service.
- Any rigging component that is capable of being repaired shall be done so according to the manufacturer's specifications and procedures, or under the direction of a professional engineer and shall be recertified prior to being returned to service.
- Any rigging component that does not conform to the manufacturer's specifications, is damaged or cannot be repaired shall be permanently removed from service and destroyed.
- All rigging equipment shall be stored in an area where it will not be subjected to mechanical damage, corrosive action, moisture, and extensive UV light and extreme temperatures or kinking.

8.6.9.2 Slings

When slings are applied to sharp edge loads, the sharp edge shall be protected with softeners sized appropriately to the manufacturer's requirements to prevent damage to the slings.

All synthetic and nylon webbing slings shall be a minimum of two-ply construction.

All slings shall be:

- Used per the manufacturer's specifications.
- Marked with an identification number, the manufacturer and the maximum capacity. This information shall be stamped on a tag permanently attached to the sling.
- Commercially manufactured.

8.6.9.3 Below-the-hook Lifting Devices

Adjustable spreader bars having multiple configuration options and capacities, shall have a load chart referencing the model and serial number of the device, and the chart shall be readily available for while the device is in use.

All spreader bars, lifting beams and other below-the-hook lifting devices shall:

- Be designed by a professional engineer.
- Be certified annually by a professional engineer.
- Have a legible and unique identifier permanently attached.
- Have their rated capacity, model, serial number and self-weight labelled on the equipment.
- Be visually inspected and documented by a qualified person for damage, deformities, cracks and wear before each use.

8.6.9.4 Come-alongs and Chainfalls

All come-alongs and chainfalls shall:

- Be designed, maintained and used in accordance with manufacturer's specifications.
- Have the capacity of the device identified on the unit.

- Not be used as stand-alone rigging components for hoisting with cranes (but can be used to balance loads).
- Not be altered in any way from the manufacturer's original design.
- Be visually inspected and documented by a qualified person for damage, deformities, cracks and wear before each use.

8.6.9.5 Rigging Hardware

All rigging hardware shall be used per manufacturer's specifications and be visually inspected for damage, deformities, cracks and wear prior to each use. Any rigging that does not have manufacturer data stamp and working load limit clearly identified shall be removed from site. Additionally:

- Shackle pins shall not be in contact with the running part of any sling.
- Shackles shall have the pins secured if there is potential for them to turn. This is mandatory when shackles are used as a component for hoisting personnel.
- All hooks shall have functioning safety latches. Hooks and other rigging components shall be attached in a secure manner. Open hooks are only to be used when attaching or disconnecting the hook and would otherwise place a worker in a dangerous position. A Job Hazard Assessment shall be conducted to establish the hazards and methods to protect against those hazards involved in the use of open hooks (i.e. spreader hooks).
- All crane hooks shall be accompanied by a certificate stating the safe working load.
- Plate and beam clamps and vacuum suction devices shall not be used for hoisting unless they cannot be practically replaced with another acceptable rigging component. If beam or plate clamps are used, they shall:
    - Be locking or designed so that slackening of the hoist cable does not release the clamp.
    - Have the manufacturers' or engineer specification on capacity, sizes and methods of inspection.

8.6.9.6 Rigging Inspection and Testing Program

All rigging is to be inspected before each use or at least once per calendar year as part of a rigging inspection program. Inspection includes visual checks and where required, re-certification and labeling. After inspection, all rigging shall be marked or otherwise identified to indicate the year of inspection.

All methods used by contractors or subcontractors to implement a rigging inspection program shall be reviewed and approved by BW Gold. Specifically:

- Inspection of rigging equipment may be conducted by a competent worker or by a third party.
- Only a competent worker may apply the marking to identify the completion of the annual inspection.

8.6.10 Hazardous Materials Management

BW Gold recognizes the dangers involved in working with chemical, biological hazards and harmful substances. Employees and contractors are expected to follow the Hazardous Materials Handling Storage and Transfer Plan. The purpose of this plan is to prevent worker exposure to chemical, biological hazards and harmful substances and to ensure that all BW Gold workers are properly informed regarding chemical and biological hazards along with harmful substances.

8.6.10.1 Workplace Hazardous Materials Information System

Hazardous materials may cause serious health problems for employees or contractors, or fires or explosions in the workplace. The Workplace Hazardous Materials Information System (WHMIS) provides information on hazardous products, so workers can protect themselves.

Employees must:

- Participate in WHMIS training programs;
- Take necessary steps to protect themselves and their co-workers;
- Participate in identifying and controlling hazards; and
- Inform employers if labels are illegible or missing.

WHMIS is managed as part of the Hazardous Materials Handling Storage and Transfer Plan (Appendix 9-M).

8.6.11 Excavations

Currently the site is a greenfield, so risks of digging do not make it likely that buried services will be encountered. Once the site is operational excavation permits will be needed to ensure that any utilities or other buried structures are not encountered.

Currently the following standard precautions when creating excavations are in place:

- A ladder shall be kept in the immediate area of persons working in any excavation over 1.2 m deep.
- Do not enter or permit anyone to enter any excavation over 1.2 meters in depth unless:
  - The sides of the excavation are sloped to a safe angle down to 1.2 metres from the bottom of the trench; or
  - The sides have been supported according to the requirements of Part 4 of the HSR Code.
- Keep excavated material back a minimum distance of 1 metre from the edge of any trench excavation, and 1.5 meters from any other excavation.
- Have a qualified person inspect an excavation immediately before any person is allowed to enter.
- Make any hazard safe before persons are allowed to conduct other work in the excavation.
- Consider using sloping of excavation sides instead of shoring only where the protection afforded to workers is equivalent to that provided by shoring.
- If excavation walls are sloped as a substitute for shoring, slope walls at angles, dependent upon soil or rock conditions, which will provide stable faces. Do not create a slope steeper than a ratio of one horizontal to one vertical.
- Use safe work procedures to protect workers when installing and removing shoring.
- During the latter stages of construction the “Permit to Dig” process will be implemented, at which time any excavation outside of the open pit, will require this permit and risk assessment prior to works commencing.
- Where there is a danger of persons falling into an excavation, it shall be covered, or standard guardrails or barriers shall be placed along the exposed sides.

8.6.12 Hot Work

Any activity on site involving open flames or producing heat or sparks, including: cutting, welding, soldering, brazing, grinding, adhesive bonding, thermal spraying and thawing pipes will be subject to BW Gold's Hot Work procedures and the appropriate Hot Work Permit shall be completed prior to commencing work.

A JHA or SOPs shall be completed prior to the hot work commencing and it shall address all potential risk involved with the task including, work area, PPE, ventilation, any respiratory requirements, trained and competent personnel, stand by (fire watch person), other persons working in the surrounding area and the environment. The risk assessment will reference the CSA Standard W117.2 for completing this assessment.

Whenever hot work is to be carried out a pre-work safety inspection shall be completed to ensure that the appropriate firefighting equipment is available and all necessary fire precautions are in place.

The operators shall wear the appropriate safety equipment and protective clothing.

A trained and competent fire watch (i.e. a person who has been instructed in the safe working practices in relation to fire prevention and protection, having full knowledge of the firefighting equipment), shall be in attendance at all times while hot work is being carried out.

The hot work permit issuer will conduct a fire check 60 minutes after the completion of all hot work prior to closing off the permit. Based on the risk assessment a longer fire watch may be required.

Prior to carry out any welding or cutting procedure you must adhere to the following:

- Check that all leads, hoses and fittings are in good condition. Any equipment found leaking or defective shall be tagged out of service and not used until repaired.
- Welders/welding operators shall wear dry gloves and dielectric boots suitable for welding that are changed as required to ensure dryness.
- Welders/welding operators use insulated needle-nose pliers that are in a good state of repair for manipulating the tungsten electrode.
- Supervisors shall ensure that welders are following all other electric shock protection requirements; and adequate training in changing electrodes is provided for welders/welding operators.
- Welding cable shall be used within the voltage and current ratings intended.
- Ensure that flash back arresters are fitted next to the regulators of the oxygen and acetylene bottles.
- Screens are to be positioned to prevent the risk of a welding flash to the eyes of other persons in the work area.
- Check if forced ventilation and/or extraction will be required.
- Welding machines left unattended shall be turned off.

8.6.13 Mobile Equipment

BW Gold has developed a Mine Site Traffic Control Plan (Appendix 9-K of this Application), which details plans for managing mine site traffic.

All BW Gold light vehicles and mobile equipment will be roadworthy and inspected for defects daily prior to use. The light vehicle (LV) must be reversed parked in a stable manner (in V-drains or using wheel chocks); hand brake applied, engine stopped and if a manual in first or reverse gear; if it is an automatic place the gear shift into park.

The pre-start inspection checklist will be based as a minimum:

- Vehicle/machine handling;
- Driver vision;
- Conditions of the brakes;
- State of the tires and the potential for tire failure/ blow out;
- Fuel and oils;
- Coolant;
- Window washers;
- Condition of the vehicle inside and out (body damage); and
- Communications etc.

No person may operate any mobile vehicle unless they hold the appropriate licence and are suitably qualified and competent to operate it. Unlicensed drivers may be liable for repair or insurance costs associated with an accident.

A vehicle, other than a vehicle used directly for production in an operating open pit, shall, additional to that equipment required for highway driving, be equipped with:

- a whip antenna that is fitted with a flag and lamp high enough to be visible to the drivers of all production vehicles; or
- a flashing light mounted above the cab of the vehicle.

8.6.14 Occupational Health/Medical Surveillance

As noted in Section 8.4.2, as the site moves closer to design completion and construction they will begin to complete Occupational Health Risk Assessments. These assessments be reviewed and updated as additional information becomes available about planned processes and equipment.

Outcomes of this assessment will dictate design changes as well as the monitoring requirements and potential for any exposure controls plans, medical surveillance programs, etc.

8.6.14.1 Workplace Monitoring

Prior to start of construction BW Gold will establish a written workplace monitoring program. This program will be developed by a Certified Industrial Hygienist or Registered Occupational Hygienist in accordance with the Chief Inspector's publication "Workplace Monitoring Procedures Manual". The monitoring program will include the use of a CIH or ROH to monitor workplace contaminants as often as necessary to ensure compliance with section 2.1.1 of the Code (e.g. levels of containments in excess of prescribed limits.

The program will specify the sampling strategy, including:

- Substances to be monitored;
- Monitoring locations;
- Frequency of monitoring;
- Number of samples;
- Sampling Methodology(equipment, collection length);and

- The Quality Assurance and Quality Control (QA/QC) measures needed to provide confidence in the results of the monitoring program.

The results of the program will be kept at site and available for examination by an inspector.

These records will be kept on file for the life of the mine and transferred to the chief inspector upon abandonment of the mine.

The monitoring program will also be subject to regular review of its effectiveness as well as ensuring it is staying current with regulatory exposure limits.

8.6.14.2 Workplace Hygiene

The manager will develop and implement an effective housekeeping program to ensure that all workplaces and travelways are maintained in a safe condition, that materials and equipment are stored in a manner so as not to endanger persons, and that appropriate action is taken whenever necessary to maintain a hazard-free environment.

The manager will provide a source of cool, potable drinking water complying with the Safe Drinking Water Guidelines of the Ministry of Health in locations that:

1. Are reasonably accessible to employees;
2. Are kept clean and in a sanitary condition; and
3. Are designed to permit the water to be dispensed and drunk in a sanitary manner.

8.6.14.3 COVID-19 Safety Plan

Due to the on-going risk of COVID-19 transmission. Suitable plans will need to be in place whenever employees and or contractors are working at site. This plan will include the following:

- Assess the risk at your workplace (e.g., where are workings coming from, what are the current transmission rates etc.);
- Implement measures to reduce the risk (COVID testing, screening, quarantine etc.);
- COVID policies (e.g., site declaration of current health and travel status, cleaning and disinfectant processes, physical distancing, masks, face shield, etc.);
- Communication plans and training (make sure employees and contractors are aware of the requirements); and
- Monitoring of the effectiveness of these plans on site.

8.6.14.4 Lunchrooms

BW Gold has established eating facilities on site that are:

- Heated, lighted, and ventilated;
- Located near facilities for persons to wash with cold and hot running water and dry their hands; and
- Are not accessed through a toilet facility.

As the site moves into construction and operations, BW Gold will ensure that any lunchroom established for more than seven employees/contractors meets the requirements of section 2.11 of the Code.

8.6.14.5 Mine Dry

Prior to commencement of operation, mine dry facilities will be designed and constructed according to section 2.11 of the Code. There will be separate facilities for male and female workers and be adequately size for the anticipated maximum number of workers. The facilities will not be located in a boiler or engine room, bunkhouse, or dining room unless a separate, properly constructed room is provided and will be adequately lite, heated and ventilated. At minimum of three showers will be provide for every seven people whose shift will end at the same time.

8.6.14.6 Dust

Combustible dusts are not anticipated to be generated at site, however, the potential for respirable fibers or dust may be generated at various stages of the Project.

BW Gold will ensure that a JHAs will be developed detailing the control measures that will be put in place to mitigate any issues arising from the dust being generated.

Control measures will include as needed:

- Dust control by water suppression. Wherever practicable, water sprays or other dust suppression means and devices will be used at every dusty place where work is carried out;
- Use of Respiratory Protective Devices as per CSA;
- Disposable overalls; and
- Personal and static dust monitoring.

8.6.15 Personal Protective Equipment

The purpose of this policy is to provide the H&S requirements for assessing workplace hazards and establishing PPE requirements for those hazards. PPE is any material or device worn to protect a worker from exposure to or contact with any harmful substance or form of energy, and is regarded as the last line of defense for controlling hazards identified.

The risks posed in any particular work activity will be assessed, and adequate PPE selected and provided in accordance with the following:

- BW Gold will ensure employees use appropriate personal protective equipment, not limited to gloves, eye protection, masks, gowns, resuscitation bags, and ventilation devices. Personal protective equipment in appropriate sizes, and allergen free, will be made available to employees.
- Personal protective equipment will be replaced as needed to maintain the effectiveness of the exposure control plan.
- Workers at project worksites wear protective and high visibility clothing, hardhats, safety-toe footwear and safety glasses with side impact protection, and have hand gloves and hearing protection with them at all times.
- A hazard assessment is completed at the worksites to identify other PPE needs. Where job conditions change, PPE selection is reviewed to ensure it is still valid.
- A hand protection program is in place specific to the scope of work providing information on the right gloves for each job.
- An eye wear program is in place specific to the scope of work.

- Proper fit of PPE is checked when selecting all PPE, clothing, coveralls and gloves. Baggy or loose clothing is not allowed.
- A procedure will be in place to manage the use and condition of PPE (e.g. when used, types used, fitting, how used, when to replace, maintenance etc.). Personal protective equipment will be replaced as needed to maintain the effectiveness any exposure control.
- All PPE will be selected, maintained, and used in accordance with the applicable CSA standards associated with each type of PPE used at the mine site.
- All workers will be provided with the necessary PPE, as identified in the JHA or Field Level Hazard Assessment (FLHA) for their work activity.
- Contractors will provide the required PPE and the necessary information/training relating to the effective use of this equipment.
- Supervisors will be responsible for ensuring that all personnel are trained in the use of, are provided with, and are wearing all PPE required for the work activity.
- Workers not wearing or using the PPE issued to them will not be allowed to continue or commence work.
- Workers will wear the appropriate PPE supplied to them at all times while working on their assigned tasks.
- The site must have a clear demarcation identifying PPE free areas and areas with special PPE requirements; this includes classified and non-classified areas.

8.6.15.1 Respiratory Protection

BW Gold's employees performing work which requires employees to wear respiratory protection, must have a written respiratory protection plan (Code of Practice) in accordance with the following requirements: (Note: A Code of Practice is not required when respirators are being worn for convenience such as disposable respirators).

Respiratory protective equipment will be available to all persons who are exposed to any situation in which there is a possibility of the atmosphere being or becoming deficient in oxygen or containing any harmful substance (i.e., particle, dust mist, vapor or gas), including the following:

- Work in containers or vessels where a danger of oxygen deficiency or harmful gases may be present;
- Work in shafts, sewers or enclosed septic tanks;
- Work in refrigeration plants where the danger of escape of refrigerant gas exists; and
- Grit or abrasive blasting operations.

Respiratory protective equipment will be used, stored, and maintained in accordance with the manufacturer's requirements.

Respiratory protection will be selected following a risk assessment of the work to be performed (i.e., JHA, method statement, etc.) and based on the information provided on the Material Safety Data Sheet (MSDS) associated with the substance being used. Respiratory protection will follow Worksafe BC's guidelines and templates (e.g., Breathe Safer – How to use a Respirator and Start a Respirator Program; WorkSafe BC 2011).

All personnel required to use a respirator (exception noted) must complete a medical questionnaire, prior to fit testing. If there is a concern with a workers ability to wear a respirator, the worker will seek permission for respirator use from a physician.

A medical evaluation will be completed annually for workers who routinely wear a respirator.

An evaluation is not necessarily a physical examination by a physician; an evaluation is a review by a "licensed healthcare professional" (LHCP) based on the job/task requirements and a completed Respirator Medical Evaluation Questionnaire. The LHCP may refer the potential respirator wearer to a physician at her/his discretion.

Personnel who wear corrective lenses will need special eyewear mounted on the interior of the respirator face piece.

- All workers required to wear a respirator will be qualitatively fit tested. Workers who successfully pass a fit test must be issued a certificate / card outlining the date of testing, company, model of respirator and name of testing personnel.
- Fit testing records will be completed and retained with the medical questionnaire on the worker's health file.
- Training records will be maintained as per project requirements.
- Half face respirators are the minimum standard to be used on site. Disposable (paper filters) respirators are not acceptable, with the exception of personnel wearing the disposable respirator for protection against nuisance particulate.
- When a breathing apparatus is used there will always be a dedicated trained attendant.
- Personnel who are required to wear respirators will be clean shaven at all times to ensure that they have an effective seal. When wearing full-face protection, sideburns will not extend below a line drawn through the top of the notch in the cartilage of the ear just above and immediately in front of the ear hole and the corner of the eye.
- It is safe practice to use chemical cartridges within one year of purchase, even if never unwrapped.
- The following Standards will be referenced for breathing air use, CAN/CSA-Z180.1-00 "Compressed Breathing Air and Systems".
- The maximum length for air lines used with NIOSH/MSHA approved supplied air respirators is 90 meters (300 feet).
- Hoses will be compatible with each other; air-line couplings will be incompatible with all other couplings on the project.
- Powered Air Purifying Respirators must be intrinsically safe if used in operations areas.
- To facilitate proper maintenance, a clean room with running water is required for maintenance of respirators.
- The CM or designate will allocate responsibility for inspection, cleaning, and maintenance of other respirators to a suitably trained employee.

Wearer-related selection factors include the following:

- Basic physiological considerations (such as regular wearing of some types of respirators places additional strain on cardiac and respiratory systems, and the physical weight of the device may pose additional physical/muscular strain).

- Workers required to use respiratory protection should be offered a choice of at least two different makes and, where available, different models of respirators. They must be allowed to choose the respirator that gives the best fit.

8.6.15.2 Hearing Conservation

Hearing protection will be worn in accordance with the requirements established in the Industrial Hygiene Plan. In summary, the following requirements will apply:

- Suitable hearing protection will be made available to all workers exposed to noise levels of 84 dB or above for a ten hour work period. At least two types of hearing protectors will be made available to workers.
- It is recommended to leave suitable hearing protection by the entrance into high-level noise areas.
- With the exception of disposable hearing protection, equipment will be properly inspected and cleaned.
- If hearing protection requirements are not posted in an area, but it is suspected that hearing protection is needed there, the matter will be reported to the H&S Manager.
- The H&S Manager with the JOHSC is responsible for establishing and identifying areas under control of the construction group where hearing protection may be required to be worn. This includes the use of protective equipment required when operating equipment that produces sound levels above 84 dBA.
- All individuals in areas where the noise exposure meets or exceeds the following (Table 8.6-1) established limits will wear hearing protection:
- Where it is determined that hearing protection is required, such a determination must be accompanied, on a regular basis, the noise level measurements to substantiate the effectiveness of the hearing protection.
- Where noise levels exceed 105 dBA earplug + A or B earmuff and limited exposure time to keep sound reaching the worker's ear drum below 85 dBA Lex.

Table 8.6-1: Noise Exposure Duration (Part 2, Table 2-2 of Code)

Length of Exposure (hours)	Average Noise Level (dBA)
16	82
12	83
10	84
8	85
4	88
2	91
1	94
1/2	97
1/4	100

Notes: 1) Table 2-2 in Part 2 of the Code. 2) Examples of equivalent levels to 85 dBA for 8 hours.

Hearing protection is mandatory to be worn in posted areas. Double protection, muffs and plugs, is required above 95 dBA. All hearing protection on the project is required to provide a minimum protection of Class A.

8.6.16 Contractor Management

Each Contractor who comes to site will provide the BW Gold Safety Department with a designated person who will be responsible for all safety related communications for their company. The Contractor will adhere to BW Gold's safety standards and will provide proof of external qualifications and training such as Fall Arrest, Confined Space, etc. Blackwater Gold reserves the right to remove any contractor or subcontractor based on their H&S performance.

Contractors will be required to

- Maintain valid workers compensation coverage before commencing work.
- Ensure that their employees are properly trained and qualified to perform duties assigned.
- Conduct investigations of all incidents, and accurately complete required reports. These reports are required for all incidents (including near misses), lost time or medical aid injuries, and are to be submitted to the H&S Manager.
- Report at the end of the contract and/or at the end of each month the hours (man-hours) worked by their employees.
- Attend the site wide Weekly Safety Management Meeting, held by the Mine Manager.

8.7 Training and Awareness

BW Gold strives to provide a safe and healthy workplace, in order to accomplish this we must ensure that our workers are adequately trained and qualified.

The company will provide and ensure that all workers receive adequate safety training, including:

- Safety orientation for all new hires, and
- Task specific training.

In addition, BW Gold will ensure that as required workers participate in the following safety training:

- New Worker Orientation;
- WHMIS;
- PPE;
- Preventing Workplace Violence and Harassment;
- Lockout/Tagout;
- Emergency Response;
- Cyanide Hazard Awareness;
- Ergonomics/MSD/MSI awareness and risk reduction; and
- Driver's Licence.

8.7.1 Training Needs Assessment

Based on role and specific tasks training needs for all staff will be assigned. Once the training profile for each role is established workers will be assigned training to be completed and records of the completion of this training.

A preliminary training needs assessment for different roles is included in Appendix 8-B.

8.7.2 Pre-Placement Screening and Policy Procedure

BW Gold ensures that all employees are qualified to perform their jobs thereby minimizing the risk of injury to themselves and others.

In order to ensure that all employees are qualified to perform their jobs and minimizing risk of injury to themselves and others, BW Gold will conduct of all newly hired and reassigned employees.

8.7.2.1 Job Posting and Application Forms

When a position needs to be filled, the supervisor will notify the manager who will develop and advertise a job posting. All job requirements will be stated, including the physical demands of the position. Applications must be in writing, with references. After all resumes and applications forms are reviewed, a list of suitable candidates will be drawn up by the manager and supervisor. These persons will be contacted for interviews.

8.7.2.2 Interviews

The requirements and the physical demands of the position must be discussed during the job interview. Determine if a person has a second job.

8.7.2.3 Reference Checks

After the initial interview, check references. Review previous employment history including the dates of prior employment and reason for leaving the last position. Take note of candidate's punctuality, attitudes, and dependability.

8.7.2.4 Qualification Checks

All qualifications required for the job will be confirmed. Obtain copies of driver's abstracts, trade certificates, or licenses. Document all information confirmed during the interviews and qualification checks. In offers of employment to a prospective employee, state that they are expected to participate in the company's disability management program.

8.7.2.5 Pre-placement RN Medical Examination / Audiogram

New employees will be required to have a Pre-Placement Assessment performed. Any person who does not meet the conditions of a Physical Demand Analysis requirements cannot be considered for the position.

8.7.3 New Employee Orientation Procedure

BW Gold will ensure that all employees complete and sign the New Hire Agreement and Safety Ticket Record, and keep this record in the employees' personnel file. Collect all safety tickets/training records, and submit a copy to the employee's personnel file. All site specific orientation stickers (as long as they do not degrade the helmet) will be displayed on hard hats of employees as well as documented in the operators handbooks.

8.7.4 Site Orientation

As the site develops, the JOHSC will be involved in reviewing and amending the site specific orientation applicable to all employees, contractors, and visitors to site. The site orientation will include but may not be limited to:

- Worksite Hazards;
- Evacuation Routes and Muster Location;
- Alarm Systems;
- ERP Equipment Location;
- Current Operations;
- Requirement to report all hazards, near misses, and incidents; and
- JHA and/or permit requirements.

8.7.5 Supervisor Hiring/Training

Supervisors at BW Gold are a heavily relied upon resource for training and safety. The company strives to ensure supervisors are experienced and qualified in order to provide the highest quality of on the job training and safety referencing. Supervisors should be qualified to coach in their area of supervision and know the applicable safety regulations. Supervisors will also hold a valid Supervisor Certification which will be renewed every 5 years.

The manager shall ensure that every worker employed in the mining of the open pit is under the supervision of the holder of an open pit shiftboss certificate where there more than six persons are employed.

8.7.6 Area Specific Training

As the site develops the JOHSC and department heads will develop any area specific training, in conjunction with the H&S Manager. Training needs to specific tasks may also be identified through risk assessment processes.

8.8 Emergency Response

BW Gold has prepared a separate MERP (Appendix 9-J of the Application). The purpose of this policy is to ensure the appropriate emergency response is provided for all types of emergencies, and to ensure the health, safety or welfare of people, the environment, property and infrastructure. Our goal is to provide quick and efficient emergency response to all situations that may arise, to ensure the best outcome for all people, property and infrastructure.

BW Gold requires that all company personnel familiarize themselves with the emergency response procedures for all types of emergencies at the worksite prior to commencing work. Emergency response procedures will be reviewed with all workers on hire, and is the responsibility of the workers to review the procedure as needed following the date.

The MERP is kept onsite and is available to all employees, contractors, and visitors.

8.8.1 Emergency Wash Facilities

Where persons may be exposed to corrosive or other chemicals harmful to the eyes or skin, the Mine Manager will ensure that eye wash equipment, emergency water baths or showers, or other suitable means are immediately available to effectively cleanse the affected body areas.

1. The emergency shower facility will provide a tempered supply of potable water for a minimum of 15 minutes.
2. In cases where it is not practical to install a permanent facility portable eye wash stations and/or portable emergency wash facilities may be installed as applicable.
3. Provisions will be taken to ensure that water supplies and eye wash isotonic fluids are protected from freezing and are adequately maintained.

8.8.2 First Aid

BW Gold expects that first aid resources that meet the regulatory requirements will be available at the work site. BW Gold will ensure that the required equipment and trained personnel will be available at the worksite. As specifics vary with the size of the work site, the hazard level of the job, and the distance to medical care, BW Gold will modify the resources accordingly.

First Aid means the immediate and temporary care given to an injured or ill person at a work site using available equipment, supplies, facilities, or services including treatment to sustain life, to prevent a condition from becoming worse or to promote recovery.

BW Gold has a responsibility to provide a safe and healthy workplace for its employees. When it comes to first aid at a job site BW Gold will provide adequate supplies and training to ensure employees receive prompt medical attention in the event of an injury.

All site superintendents, supervisors and site safety representatives will receive at a minimum, First Aid/CPR-C training provided by an industry recognized accredited provider. The training will be renewed every three years. While no one is required to provide first aid treatment, the training will give the supervisors the skill and knowledge to competently assist employees with first aid needs that do not require the assistance of Emergency Medical Technicians.

8.8.2.1 First Aid Supplies

The manager shall provide and maintain first aid supplies and services as required by WorkSafe BC (section 3.6.1. of the Code). Supplies will be inspected prior to shipping and stored in tool trailers and/or office trailers. Supplies must be kept clean and sanitary. All first aid supplies are stored in individual wrappers or packages. Individual eyewash bottles will be supplied at each first aid area as needed. No opened bottles may be stored for use by others. Portable eyewash stations may be required in areas where caustic, toxic or corrosive chemicals are used.

First aid supplies are inspected monthly and replenish as needed any deficient amount of first aid supplies.

8.9 Incident Reporting and Record Keeping

8.9.1 Incident Reporting

Following any safety incident the following screening shown in Figure 8.9-1 will be used to determine reporting and follow up obligations. In addition, Indigenous nations will be informed of reportable incidents and corresponding corrective actions and will be provided with JOHSC monthly meeting minutes.

All reportable incidents must be reported to the Mine Incident Reporting Line 24/7 at the following:

- Phone: 1-888-348-0299.
- Email: MineIncidents@gov.bc.ca.

For all reportable incidents the JOHSC, local union or worker representative and Ministry of Energy, Mines and Low Carbon Innovation mines inspectors must be informed as per the Code; within 4 hours for accidents resulting in loss of life and 16 hours for dangerous occurrences. JOHSC co-chairs must be informed within 4 hours of injuries which require medical aid.

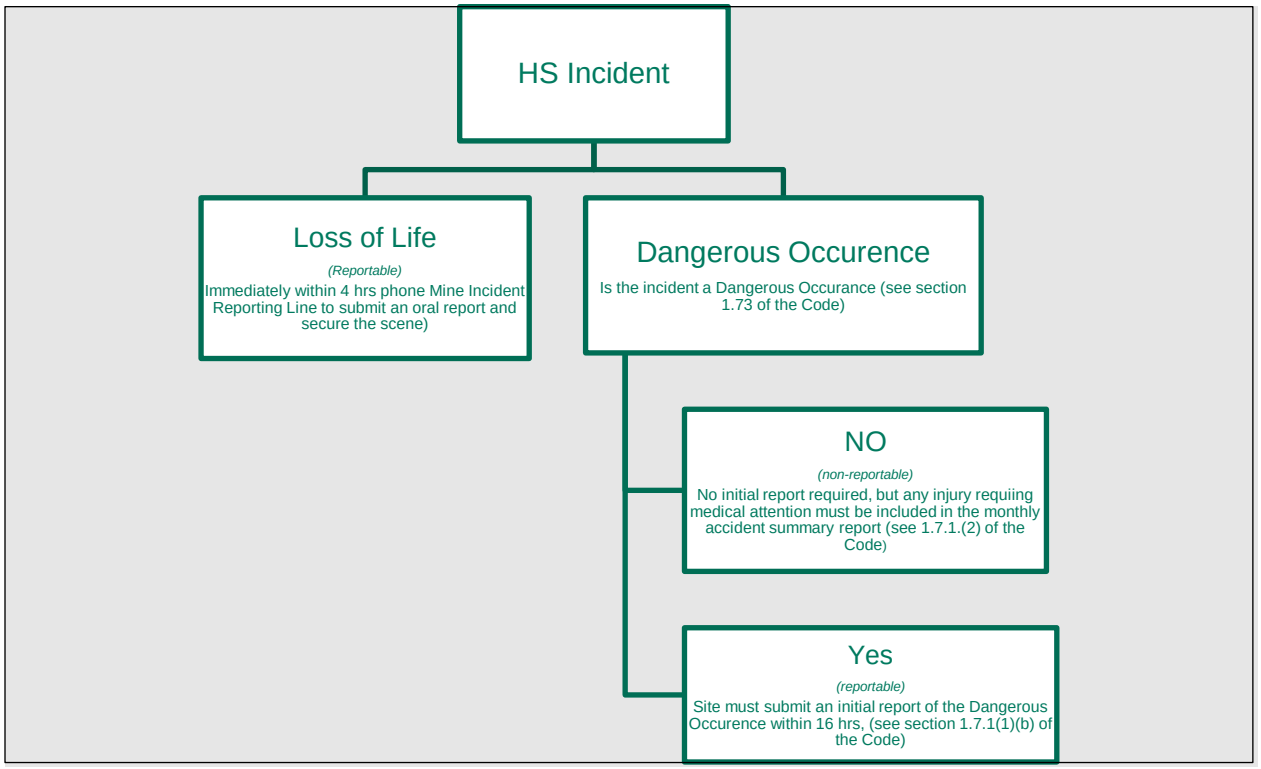

Figure 8.9-1: Incident Reporting

Dangerous occurrences to be reported will include:

- Unexpected major groundfall or subsidence, which endangers people or damages equipment or poses a threat to people or property;
- Cracking or subsidence of a dam or impoundment dike, unexpected seepage or appearance of springs on the outer face of a dam or dike; loss of adequate freeboard, washout or significant erosion of a dam or dike, any of which might adversely affect the integrity of such structures;
- Unexpected inrush of water, mud, slurry, or debris;
- Premature or unexpected explosion of explosives, gas or any dust;
- Significant inflow or release of explosive or other dangerous gas;
- A mine vehicle going out of control;
- Outbreak of fire if it endangers persons or threatens or damages equipment;
- Electrical equipment failure or incident that causes or threatens to cause injury to persons or damage to equipment or property, and
- Any other unusual accident or unexpected event which had the potential to result in serious injury.

8.9.2 Reporting to WorkSafe BC

If any employee experiences a work related injury or disease and gets medical treatment from a doctor or other qualified practitioner, BW Gold must also report the incident to WorkSafe BC. Form 7 (see Appendix 8-C) must be submitted to WorkSafe BC within three days of the incident. An injury that results in lost time from work also requires reporting.

In the event of any of the following WorkSafe BC must be notified immediately:

- A serious injury to or death of a worker;
- Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation;
- Major release of a hazardous substance;
- Fire or explosion that had a potential for causing serious injury to a worker;
- Blasting incident causing personal injury; and
- Dangerous incident involving explosives, whether or not there is personal injury.

In these incidents unless BW Gold is directed by WorkSafe BC or a peace officer, the scene of the incident will barricaded off and not disturbed, except to:

- Attend to persons injured or killed;
- Prevent further injuries or death; and
- Protect property that is endangered as a result of the accident.

8.9.3 Incident Investigations

Incident investigations will be completed in a timely manner (typically within 3 days expect where additional time is required to investigate the incident.) Incident investigations are completed on the BW Gold Accident/Incident Reporting Form & Investigation Report, see Appendix 8-D.

The prevention of recurrence is the primary goal of the investigation and these are not conducted to place blame but are meant to increase awareness and promote corrective action to the surrounding workplace, equipment or training programs.

The purpose of an investigation is to:

- Determine the root cause and the conditions that created the cause.
- Identify any unsafe conditions or unsafe acts.
- Identify unsafe job procedures that contributed to the cause.
- Develop and implement corrective actions or systems to prevent recurrence.

Management also ensures recommended changes in job procedures or physical conditions are acted upon quickly to prevent recurrence of a similar incident.

Components of an incident investigation include:

- Scene investigation;
- Preservation of evidence;
- Interviews; and
- Photos.

A safety representative will be included with the investigation, as well as the parties involved. Management will ensure that members of the incident investigation team receive adequate training to conduct effective investigations. This training will include:

- Definition of incidents, and who, what, when, where and why to investigate;
- Conducting investigation interviews;
- Completing the incident investigation form that includes primary and secondary causes; and
- Recommending corrective action.

8.9.4 Tracking of Safety Performance

Safety statistics provide a summary of the performance of all the safety programs implemented on the mine site. They provide trends for positive actions and identify negative trends that require attention and correction.

The following information is to be sent to the Mine Manager and H&S Manager as per the timing noted:

- Fatality = Immediately;
- Lost Time Injury = Immediately;
- Medical Aid Injury = Within one hour of occurrence;
- Near-Miss with Potential for Serious Injury or Damage = Same Shift;
- Property Damage or Equipment Damage (over $1,000) = Same Shift;
- Dangerous Occurrence = Immediately; and
- Environmental Damage or Hazardous Material Spill = Immediately.

The safety statistics shown on Table 8.9-1 (Health and Safety Frequency Rates), will be conspicuously posted on noticeboards around the mine site so everyone is aware of the site's performance.

Table 8.9-1: Health and Safety Frequency Rates

Parameter	Calculation
Injury Frequency Rate	# Recordable Cases x 1,000,000/Man Hours Worked
Lost-Time Injury Frequency Rate (LTI)	LTI x 1,000,000/Man Hours Worked
Medical Aid Frequency Rate (MAF)	MAF x 1,000,000/Man Hours Worked
Severity Rate (SR)	# of Lost Days x 1,000,000/Man Hours Worked
Total Reportable Incident Frequency Rate (TRIF)	MAF + LTI = TRIF

8.9.5 Record Keeping

Statistics on H&S performance, records of incident reporting, investigation and response will be kept at the site indefinitely and safety performance will be provided to the BW Gold's corporate group on a monthly basis.

8.10 Monitoring

Monitoring of the performance of the site with respect to health and safety is accomplished through several means, including workplace inspections, audits, and monitoring and review of performance against KPIs, see Section 8.10.3.

8.10.1 Workplace Inspections

A key component of a safe workplace is through an inspection process. Inspections of the workplace are intended to identify unsafe conditions and unsafe acts with the potential to cause injury or damage, determine corrective measures and maintain and safe and healthy workplace.

Regular, planned workplace inspections: Inspect buildings, structures, grounds, excavations, tools, equipment, machinery, and work methods and practices for hazards that might cause injury, ill health or damage. Schedule these inspections at appropriate intervals to prevent unsafe conditions developing. Depending on the workplace and the type of hazards that might develop, inspections will be scheduled by shift, daily, weekly or monthly.

Equipment inspections: Employees will be trained to inspect their machinery, tools, and equipment regularly, following the manufacturer's recommendations or the preventative maintenance schedule. This will include equipment-specific inspections such as pre-operational inspections for mobile equipment, and ensuring guards are in place on moving equipment such as crushers and conveyors.

JOHSC Monthly Inspections: The JOHSC will inspect as many areas of the work sites as it considers appropriate every month and as soon as possible after the inspection, meet to discuss its findings and any other matters concerning health and safety.

8.10.2 Audits

BW Gold will complete periodic audits of their health and safety programs to ensure the programs remain effective and suitable to site activities. Audits will be completed by person independent of the activity being audited and follow standard auditing processes.

8.10.3 Key Performance Indicators

The KPIs for the Project are a set of defined measures against which the Project OH&S performance can be evaluated. See Table 8.10-1 for table of KPIs established for the project. Monthly reports will show current month, last month, and year to date comparisons of all KPIs. Monitoring results will be used to determine if the following performance targets are being met:

Table 8.10-1: Key Performance Indicators

Objective	Performance Measure	Target
Timely reporting of incidents.	Initial notification of incidents within 24 hours of occurrence.	100%
Timely response to incidents.	Incident investigation report completed and handed to Mine Manager within 3 working days of the incident or as otherwise agreed with BW Gold.	100%
	BW Gold will close out all actions arising from the incident investigation as per the scheduled dates indicated in the action plan. Time periods will vary based on the level of effort needed.	100%

Objective	Performance Measure	Target
Timely and effective communication and consultation on safety with all BW Gold employees and Contractors.	Minuted weekly Toolbox Meetings. Minutes to be distributed on the Health and Safety notice boards and crib rooms.	100%
	Minuted daily Pre-Start Meetings. Minutes to be distributed on the Health and Safety notice boards and crib rooms.	100%
Trained and competent work force.	All Project personnel to have successfully completed the required Site Induction(s).	100%
Timely and effective site Safety monitoring of work activities.	1 x formal weekly site HS Inspection to be conducted by the BW Gold Project and/or Construction Manager.	100%
Reduce Injuries.	BW Gold will strive towards the goal of 'ZERO HARM' and track and aim to reduce the number of Medical Treatment Injuries (MTI's) per 1 million man hours.	MTI FR

8.11 Evaluation and Adaptive Management

BW Gold is committed to the continual improvement of its OHS management and performance.

The OSHP will be reviewed periodically to verify implementation and the continued suitability, adequacy and effectiveness of the OHSP, at a minimum on an annual basis. Changes to the program will be developed with the JOHSC and reviewed with Indigenous nations. The review will include an evaluation of the effectiveness of injury and illness prevention measures as well as the plans continued suitability for site operations.

As changes are made to the OHSP all site personnel must be informed of changes as relevant to ensure that the most up to date plan is being implemented. This notification can take the form of notification postings, crew talks, formal training, smaller group discussions or a combination of formats.

As the OHSP is a living document, additional triggers to update the program may include:

- Changes to other relevant management plans;
- The types and quantities of chemicals or reagents on site;
- Infrastructure or processes;
- Moving into different operational phases;
- Orders, citations or other processes where non-compliances are identified (such as audit findings);
- Changes in regulatory requirements; and
- Incidents.

8.12 Post-Permitting Requirements

Information may be identified during the review of the *Mines Act/Environmental Management Act* Permits Application and in *Mines Act* permit conditions that must be submitted prior to the commencement of Blackwater Project Construction. Provided below is an outline of information that is typically required 60 days prior to the start of construction as described in the 2019 Joint Application Information Requirement (EMPR & ENV 2019).

8.12.1 Issued For Construction Plans

BW Gold will submit Issued for Construction plans prepared by Qualified Professionals (QP) to the Chief Inspector of Mines, as directed by the Ministry of Energy, Mines and Low Carbon Innovation and *Mines Act* permit conditions. This may include the following information:

- Designs and details for processing facilities, mine buildings and other infrastructure, water treatment facilities and significant utility infrastructure, including:
  - General HVAC systems and local exhaust ventilation (in particular for locations such as reagent storage and handling, crushing, screening and conveying circuits, laboratories, weld bays, and shops). Information provided must indicate what contaminants the system was designed to capture, hoods, fans, duct size/lengths, air flows and discharge;
  - Plumbing;
  - Emergency wash station type and locations;
  - Mechanical; and
  - Locations of emergency exits, signage, and lighting;
- Process flow sheets;
- Designs and details for hazardous material storage and handling areas including information on storage containers, secondary containment, flammability/explosive risk, incompatibilities, and individual chemical requirements such as temperature and moisture; and
- Electrical drawings, including power generation (generators), power transmission lines, and location of substations. Electrical equipment must be approved for use in Canada as defined by CSA Standard M421.

8.12.2 Letters of Assurance

Prior to building occupancy, BW Gold will submit to the Chief Inspector of Mines schedules pursuant to the “Letters of Assurance” section of the B.C. Building Code (Government of BC 2018) that are prepared, sealed and signed by QPs. In addition, the following will also be provided:

- Confirmation of compliance with the B.C Building Code and BC Fire Code for non-permanent infrastructure; and
- Buried services drawings.

Prior to the introduction of electricity at the mine site from the grid, and use of the electrical distribution system, BW Gold will submit to the Chief Inspector of Mines a letter of assurance from a Professional Engineer confirming that as-built installations comply with the Canadian Electrical Code and CSA Standard M421-16, as described by Sections 5.1 and 5.2 of the Code.

8.12.3 Occupational Health Programs

Prior to start of activities under the *Mines Act* permit, BW Gold will provide programs, plans, and procedures related to occupational health to the Chief Inspector of Mines. At a minimum these plans will include a: Workplace Monitoring Program, Medical Surveillance Program, Hearing Conservation Program, Respiratory Protection Program, and Musculoskeletal Disorder Prevention Training Program.
These programs will be prepared by a QP in occupational hygiene (e.g., COH, ROH or person with equivalent experience acceptable to the Chief Inspector).

8.12.4 Workplace Hazardous Materials Information System (WHIMIS)

Prior to the start of activities occurring under the *Mines Act* permit involving the use, storage, and handling of hazardous products, BW Gold will submit documentation demonstrating how WHMIS requirements in the Code will be met. At a minimum, this information will include procedures for the safe use, storage, handling, and disposal of a hazardous product. This documentation will be prepared by a QP.

8.12.5 Additional Information and Certifications

BW Gold will provide the following additional information and/or certifications to the Chief Inspector of Mines prior to the use, commissioning, or commencement of the following equipment as applicable:

- Documentation of commissioning and load testing of any cranes to be installed for the project prior to these devices being put into service;
- Approval for boilers and elevators from the Chief Inspector of Mines prior to installation and commissioning of these devices; and
- Certification of pressure vessels pertaining to the *Boiler and Pressure Vessels Act* and CSA B-51.

8.13 References

Definitions of the acronyms and abbreviations used in this reference list can be found in the Glossary and Abbreviations section.

Legislation

British Columbia Building Code Regulation, 264/2012.

British Columbia Fire Code Regulation, BC Reg. 263/2012.

Building Act, SBC 2015, c. 2.

Building Act General Regulation, 131/2016.

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

Electrical Safety Regulation, BC Reg. 100/2004.

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

Explosives Regulation, 2013, SOR/2013-211.

Fire Services Act, RSBC 1996, c. 144.

Food Premises Regulation, BC Reg. 210/99.

Gas Safety Regulation, BC Reg. 103/2004.

Hazardous Materials Information Review Act, RSC 1985, c. 24 (3rd Supp), Part III.

Hazardous Materials Information Review Regulations, SOR/88-456.

Hazardous Products Act, RSC 1985, c. H-3.

*Hazardous Products Regulations, S*OR/2015-17

Health Hazards Regulation, BC Reg. 216/2011.

Industrial Camps Regulation, BC Reg. 208/210.

Industrial Roads Act, RSBC 1996, c. 189.

Mines Act, RSBC 1996, c. 293.

Nuclear Substances and Radiation Devices Regulations, SOR/2000/207.

Nuclear Safety and Control Act, S.C. 1997, c.9.

Packaging and Transport of Nuclear Substances Regulations, 2015 (SOR/2015-145).

Passenger Transportation Act, SBC 2004, c.39.

Passenger Transportation Regulation, BC Reg. 266/2004.

Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation, BC Reg. 104/2004.

Public Health Act, SBC 2008, c. 28

Radiation Protection Regulations, SOR/2000-203.

Safety Standards Act, SBC 2003, c. 39.

Safety Standards General Regulation, BC Reg105/2004.

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

Transport of Dangerous Goods Regulation, BC Reg. 231/2002.

Transportation of Dangerous Goods Act, SC 1992, c. 34.

Vehicular Traffic on Industrial Roads Regulations, BC Reg. 450/59.

Workers Compensation Act, RSBC 2019, c. 2019.

Secondary Sources

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BC EMPR & ENV. 2019. *Joint Application Information Requirements for* Mines Act *and* Environmental Management Act *Permits*. Province of BC.

BC EMPR. 2020. *Guidance Document – COVID 19 Safety Plans*. May 19, 2020.

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WorkSafe BC. 2013. *Towards a Respectful Workplace: A Handbook on preventing and addressing workplace bullying and harassment*.

WorkSafe BC. 2017. *How to Implement a Formal Occupational Health and Safety Program.*

Worksafe BC. 2018. *Handbook for Joint Health and Safety Committees*.

Worksafe BC. 2020. *Joint Health and Safety Committee – Evaluation Tool.*

Office of the Chief Inspector of Mines. 2016. *A Guideline to Reducing Inorganic Lead Exposure in Fire Assay Laboratories*. Office of the Chief Inspector of Mines. April 2016.

Office of the Chief Inspector of Mines. 2016. *A Guideline for the Use of Perchloric Acid and Perchloric Acid Fume Hoods.* Office of the Chief Inspector of Mines. April 2016.

APPENDIX 8-A PRELIMINARY OCCUPATIONAL HEALTH AND SAFETY RISK ASSESSMENT

Appendix 8-A: Preliminary Occupational Health and Safety Risk Assessment

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Physical Hazards	Confined spaces		x	x	x		Gas monitoring, Ventilation	Confined Space Entry, Confined Space Monitoring, Confined Space Rescue	Hazard Assessment, Permits, Confined Space Program
	Dropped objects	x	x	x	x		Tool tethers, netting, barricades	PPE, Working at Heights	Working at Heights Program, JHAs
	Hazardous Energy	x	x	x	x	x	Energy isolation locks, safety interlocks, blocks	Hazardous Energy Control (LOTO)	Hazardous Energy Control Program, Equipment Specific Lockout procedures.
	Ergonomics	x	x	x	x	x	Equipment design and selection	Ergonomics	Work demands analysis, MSD program, Ergonomics assessments, JHAs, Workplace inspections
	Excavations	x	x	x	x		Shoring, barricading	Ground Disturbance Training	Ground Disturbance Program, Excavation Requirements Procedure.
	Fall of ground		x	x	x		Ground Stability Monitoring, Highwall dumps, road and tailings design	Pit Scaling Training	Risks Assessment, JHAs, Work in Pits SOP, Pit Inspections, Tailings OMS, Road and Site inspections SOPs

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Physical Hazards *(cont'd)*	Falls from heights	x	x	x	x		Barricades, Fall arrest, Fall restraint anchors and PPE, Selection of Equipment	Working at heights training, training in operation of manlifts	Working at Heights Program, JHAs, equipment inspections
	Hot Work	x	x	x	x		Ventilation, selection of equipment, Fire blankets	Hot Work, Hot Work Permit Issuer, Fire Extinguisher, Trade Certificates	Hot Work Program, Impairment Program, Hot Work Permits
	Lasers		x	x			Selection of Equipment	Site Orientation	Eventually develop laser policy in HSE Manual
	Lifting and handling	x	x	x	x	x	Selection of Equipment, certification of lifting devices	Lifting and Rigging Training	Lifting and Rigging SOPs, Inspection Programs
	Mobile Equipment	x	x	x	x	x	Selection of Equipment, presence sensing devices, Design/engineering of roads, mirrors, intersection controls	Driver training	Mine Site Traffic Control Plan, Risk Assessment of high risk intersections, JHAs
	Noise	x	x	x	x		Sound Dampeners, sound barriers,	Hearing Conservation Training	Hearing Conservation Program, including Noise Monitoring Program, Audiometric Monitoring Program, Noise Abatement Program
	Radiation			x	x		Radiation shielding, equipment selection	Equipment training, Radiation Safety Officer Certification	Radiation Safety Manuals, JHAs
	Railways		x	x	x		Crossings, designated yards, interlock devices	Site Orientation	Rail Policy, JHAs

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Physical Hazards *(cont'd)*	Slips, trips and falls	x	x	x	x	x	Building design/engineering, Selection of Equipment		Workplace inspections, JHAs, 5Point Safety Systems
	Tailings			x	x	x	Ground Stability Monitoring, Highwall dumps, road and tailings design	Task specific Training under OMS	Tailings Management Plans, OMS
	Vibration	x	x	x	x		Equipment design and selection	Tool use training	SOPs on tool use, JHAs, Work demands analysis, MSI program, Ergonomics assessments
Environmental	Cold stress	x	x	x	x	x	Rest rooms / lunch rooms	Site Orientation	SOPS on inclement weather
	Heat stress	x	x	x	x	x	Rest rooms / lunch rooms	Site Orientation	SOPS on inclement weather
	Extreme temperatures	x	x	x	x	x	Rest rooms / lunch rooms	Site Orientation	SOPS on inclement weather
	Sun and UV radiation	x	x	x	x	x	Rest rooms / lunch rooms	Site Orientation	SOPS on inclement weather
	Poor lighting	x	x	x	x	x	Light Survey		Workplace inspections
	Avalanche	x	x	x	x	x	Controlled Avalanches	AST Training, Site Orientation	Risk Assessment
Chemical Hazards	Acetic Acid			x			Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Ammonia			x			Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Ammonium Nitrate			x			Approved containers, secondary containment, spill kits	Blaster Certificates	Explosive management plan

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Chemical Hazards *(cont'd)*	Asbestos						Abatement procedures	Asbestos Awareness	Asbestos Management Plan
	Asphalt fumes		x	x			Ventilation, wind/air monitoring	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Borax			x			Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Carbon		x	x			Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Carbon dioxide	x	x	x	x		Gas detection where required.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Carbon monoxide	x	x	x	x		Gas detection where required.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Chloramines			x			Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Chlorine			x			Gas detection where required, Compressed Gas storage design	WHIMIS, Site Orientation, Water Treatment Plant Certified Operator	Chemical Storage and Materials Storage, Transfer and Handling Plan, Water and Sewage Treatment Plans
	Combustible dust						Ventilation	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Chemical Hazards *(cont'd)*	Copper Sulphate			x	x		Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Cyanide (HCN, sodium cyanide)			x			Equipment design and selection, gas monitoring	WHIMIS, Site Orientation, Cyanide Awareness, task specific training, Cyanide emergency response training.	Cyanide Management Plan
	Drilling fluids	x	x	x	x		Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Drywall		x	x			Ventilation	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Dust	x	x	x	x		Use of wet vacuum, wet method	WHIMIS, Site Orientation	Fugitive Dust Management Plan, housekeeping
	Ethylene Glycol	x	x	x	x		Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Flocculants			x			Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Formaldehyde						Approved containers, secondary containment, spill kits	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Chemical Hazards *(cont'd)*	Fuels (diesel, gasoline, jet fuel)	x	x	x	x	x	Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation, Fuel handling/spill training	Fuel Management Plan
	Grinding Media			x			Ventilation	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Hydrated Lime			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Hydrochloric Acid			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Hydrofluoric Acid			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation, HF first aid training	Chemical Storage and Materials Storage, Transfer and Handling Plan, HF first aid plan
	Hydrogen Peroxide			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Hydrogen Sulphide			x			Sewage treatment plant design, monitoring with gas detectors, detector calibration.	Training for sewage treatment plant operators	SOPs for entering sewage treatment plant, door signage
	Isocyanates		x	x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Chemical Hazards *(cont'd)*	Latex	x	x	x	x	x	Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Lead		x	x	x		Ventilation, scrubber systems, maintenance plans (if required)	WHIMIS, Site Orientation, Lead Exposure Control Training	A Guideline to Reducing Inorganic Lead Exposure in Fire Assay Laboratories, Safe Work Procedures, Lead Exposure Control Plan, Exposure Monitoring
	Mercury						Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Metalworking fluids		x	x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Motor Oil/ Hydraulic Oil/ Transmission Fluid	x	x	x	x	x	Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Nitre			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Nitric Acid			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Oxygen		x	x			Engineered Compressed Gas Storage	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Chemical Hazards *(cont'd)*	Paints and coatings		x	x			Storage lockers, ventilation.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Perchloric Acid			x			Ventilation, maintenance plans (if required)	WHIMIS, Site Orientation, Perchloric Acid Handling and Spill Training	A Guideline for the Use of Perchloric Acid and Perchloric Acid Fume Hoods, Safe Work Procedures
	Pesticides and fumigants			x			Ventilation	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Propane	x	x	x	x		Engineered Compressed Gas Storage	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Radon	x	x	x	x	x			
	Silica	x	x	x	x		Make-Up Air systems, exhaust systems	WHIMIS, Site Orientation	Safe Work Procedures, Silica Exposure Control Plan, Exposure Monitoring
	Smoking-related toxins	x	x	x	x	x	Designated smoking areas	Site Orientation	Site Policies around smoking
	Sodium Carbonate						Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Sodium Hydroxide			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Chemical Hazards *(cont'd)*	Sodium Metabisulphite			x			Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Sodium Nitrite	x		x		x	Approved containers, fill alarms, secondary containment, spill kits.	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Sulphur Dioxide			x			Engineered Compressed Gas Storage, SO_2 monitoring	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Varsol		x	x	x		Make-Up Air systems, exhaust systems	WHIMIS, Site Orientation	Chemical Storage and Materials Storage, Transfer and Handling Plan
	Welding gases and fumes		x	x	x		Make-Up Air systems, exhaust systems	Hot Work training, Hot Work Permit Issuer Training, Hot Work Fire Watch Training.	Hot Work Program, Hot Work permits, Workplace Monitoring Program
Biological Hazards	Mould	x	x	x	x	x	Building design/engineering, and maintenance	Site Orientation	Workplace inspections, mould remediation if necessary, housekeeping
	Toxic plants	x	x	x	x	x	PPE	Site Orientation	Invasive plant program
	Wildlife and insects	x	x	x	x	x	PPE	Site Orientation	Wildlife Management Program
	Human pathogens (COVID 19, food borne pathogens)	x	x	x	x	x	Universal precautions	Site Orientation	COVID-19 Safety Plans, housekeeping processes

Category	Hazards	Mining Stage					Hazard Controls		
		Exploration	Construction	Operation	Closure	Post-Closure	Engineering	Training	Management Plans, SOPs
Other Hazards	Fatigue impairment	x	x	x	x	x		Site Orientation	Fitness to Work Policy, Supervisors.
	Substance use and impairment in the workplace	x	x	x	x	x		Site Orientation	Drug and Alcohol Policy, Supervisors
	Violence	x	x	x	x	x		Site Orientation	Violence and Harassment Policy, Supervisors
	Working alone or in isolation	x	x	x	x	x	Explore people monitoring technology to track employees working in isolation.	Site Orientation	Working alone policy, Supervisor/Security

APPENDIX 8-B PRELIMINARY TRAINING NEEDS ASSESSMENT

Appendix 8-B: Preliminary Training Needs Assessment

Training	Role											
	All Employees	JOSCH Member	Shift Boss	Mine Supervisor	Maintenance	Mill Operator	H&S Superintendent	Haul Truck Drivers	Forklift Operator	Mine Rescue Member	Blaster	RSO
New Worker Orientation	x											
WHMIS	x											
PPE	x											
Preventing Workplace Violence and Harrassement	x											
Lockout/Tagout	x											
Emergency Response	x											
Cyanide Hazard Awareness	x											
Ergonomics	x											
Driver's Licence	x											
Bear Awareness	x											
Confined Space					x	x	x					
Fall Protection					x	x	x					
JOHSC initial Training		x										
JOHSC refresher		x										
Mobile Equipment Operators								x	x			
Lifting and Rigging					x		x					
Electrical Safety					x							
Mine Driving					*	*	x	x				
Radiation Safety Officer												x
Blasting Certificate											x	
Shiftboss Certification			x									
Mine Supervisor Certification				x								
Mine Rescue Certification										x		
Task specific training	*	*	*	*	*	*	*	*	*	*	*	*

** as needed*

x - Required Training

APPENDIX 8-C FORM 7

WORK SAFE BC

Employer's Report of Injury or Occupational Disease

As an employer, the *Workers Compensation Act* requires you to submit this report **within three days** of an injury to one of your workers, even if you disagree with the claim. By submitting your report promptly, you avoid penalties and delays in the adjudication of the claim. Please report using one of the following options:

1. **Online — The quickest and easiest option**: The online screen application customizes questions to the worker's injury. You can save your report and update it later with new information. Once submitted, you can follow the status of the claim online. Go to **worksafebc.com** and select "Report injury or illness."
2. **Fillable PDF form**: Type in your details online, print the form, and submit it by **fax** or **mail**. Go to **worksafebc.com** and select "Report injury or illness."
3. **Paper form**: Clearly **print** details, sign the form, and submit it by **fax** or **mail**.
   Fax: **604.233.9777** in Greater Vancouver or **toll-free** within BC at **1.888.922.8807**
   Mail: WorkSafeBC, PO Box 4700 Stn Terminal, Vancouver BC V6B 1J1

WorkSafeBC claim number (if known)

Employer information

Employer's name (as registered with WorkSafeBC)			Type of business	
WorkSafeBC account number		Classification unit number	Operating location number	
Employer address line 1 (mailing)		Employer contact last name	First name	
Employer address line 2 (mailing)		Employer contact telephone (and area code)	Extension	Employer contact fax (and area code)
City	Province/state	Employer payroll contact last name	First name	
Country (if not Canada)	Postal code/zip	Employer payroll contact telephone (and area code)	Extension	Employer payroll contact fax (and area code)

Worker information

Worker last name	First name	Middle initial	Gender ☐ M ☐ F
Date of birth (yyyy-mm-dd) - -	Home phone number (include area code)	Social insurance number	
Address line 1		Address line 2	
City	Province/state	Country (if not Canada)	Postal code/zip

1. What is the worker's occupation?	2. Has the worker been employed by this firm for less than 12 months? ☐ Yes ☐ No	3. If yes, start date (yyyy-mm-dd)

4. At the time of injury, was the worker (check all that apply)

☐ Permanent	☐ Apprentice	☐ Self-employed	☐ Casual
☐ Temporary	☐ Volunteer	☐ Principal/partner or relative of employer	☐ Other (specify)
☐ Full time	☐ Student	☐ Fisher	
☐ Part time	☐ New entrant to workforce	☐ Hired on a contract basis	

Incident information

5. Date of incident (yyyy-mm-dd) - -	Time of incident (hh:mm) ☐ am ☐ pm **OR**	6. Period of exposure resulting in occupational disease (yyyy-mm-dd) From To
7. Did worker report injury or exposure to employer? ☐ Yes ☐ No ▶	8. The injury or disease was first reported to employer on (yyyy-mm-dd)	(please check one) To: ☐ First aid ☐ Supervisor ☐ Office ☐ Other (specify)
9. Name of person reported to		
10. Describe how the incident happened	11. Describe the injury in detail (what part of the body was injured)	
	12. Side of body injured ☐ Left ☐ Right ☐ Both ☐ Not applicable	
13. Describe the work incident location (address, city, province) and where incident occurred (e.g. shop floor, lunchroom, parking lot)		
14. Did the injury(ies) or exposure result from a specific incident? ☐ Yes ☐ No		

WORK SAFE BC

Employer's Report of Injury or Occupational Disease

If faxing form, please complete this section and fax both sides of page. Missing pages may result in delays in processing.

Worker last name	First name	Middle initial	WorkSafeBC claim number (if known)

Social insurance number	Personal health number (CareCard)	Date of incident (yyyy-mm-dd)	Date of birth (yyyy-mm-dd)
		- -	- -

15. Contributing factors — select **at least one**, and as many as applicable

- ☐ Lifting ☐ lb ☐ kg
- ☐ Overexertion
- ☐ Repetitive (activity repeated over and over again)
- ☐ Slip or trip
- ☐ Twist
- ☐ Fall
- ☐ Struck
- ☐ Crush
- ☐ Sharp edge
- ☐ Fire or explosion
- ☐ Harmful substances in the work environment
- ☐ Animal bite
- ☐ Assault
- ☐ Motor vehicle accident
- ☐ Unsure/other (please explain below)

16. Were there any witnesses? ☐ Yes ☐ No	17. Did the incident occur in British Columbia? ☐ Yes ☐ No
18. Were the worker's actions at time of injury for the purpose of your business? ☐ Yes ☐ No	19. Did the incident occur on employer's premises or an authorized worksite? ☐ Yes ☐ No
20. Did the incident happen during the worker's normal shift? ☐ Yes ☐ No	21. Was the worker performing their regular duties at the time of the incident? ☐ Yes ☐ No
22. Did the worker receive first aid? ☐ Yes ☐ No Date (yyyy-mm-dd) ▶	If yes, please provide first aid attendant name (if known)
23. Did the worker go to hospital, clinic, or visit a physician or qualified practitioner? ☐ Yes ☐ No Date (yyyy-mm-dd) ▶	If yes, please provide provider name (if known)
If yes, please provide provider address (if known)	
24. Are you aware of any recent pain or disability in the area of the worker's reported injury? ☐ Yes ☐ No	
25. Do you have any objections to the claim being allowed? ☐ Yes ☐ No ▶	If yes, please explain

Wage information

26. Did the worker miss any time from work beyond the date of injury or exposure? ☐ Yes ☐ No

If **no work was missed** and **no change** to duties/pay, proceed to bottom of page to sign, date, and submit this report.
If **work was missed** or if duties/pay have been **modified**, please answer **all** questions on this form.

27. Provide the **base salary** amount for this employment position at the time of injury
$ ☐ Hourly ☐ Daily ☐ Weekly ☐ Monthly ☐ Yearly

28. Does worker receive other amounts of compensation in addition to **base salary**? ☐ Yes ☐ No
Does worker receive vacation pay on every cheque? ☐ Yes ☐ No
If yes, vacation pay _____%

Please select check boxes for any of the following amounts worker receives in addition to **base salary** AND provide the amount for each:
- ☐ Tips and gratuities $_____ ☐ Room and board $_____
- ☐ Shift differential $_____ ☐ Other $_____
- ☐ Overtime $_____

29. If worker is disabled from work, will you continue to pay:
Base salary? ☐ Yes ☐ No
Other amounts of compensation in addition to **base salary**? ☐ Yes ☐ No
Will worker receive vacation pay on every cheque? ☐ Yes ☐ No
If yes, vacation pay _____%

Please select check boxes for any of the following amounts worker will continue to receive in addition to **base salary** AND provide the amount for each:
- ☐ Tips and gratuities $_____ ☐ Room and board $_____
- ☐ Shift differential $_____ ☐ Other $_____
- ☐ Overtime $_____

30. Provide the amount of **gross** earnings for the past 3 months or 12 weeks prior to the date of injury or exposure
$ ☐ 3 months ☐ 12 weeks

31. Does the worker have a fixed-shift rotation? ☐ Yes ☐ No

32. If no, please explain

33. If yes, show the normal work week by entering the paid hours

Sun	Mon	Tues	Wed	Thu	Fri	Sat

34. Did the worker continue to work past day of injury? ☐ Yes ☐ No	35. Last day worked (yyyy-mm-dd)	
36. Number of hours scheduled to work on last day worked	37. Number of hours worked on last day	38. Number of hours paid by employer on last day worked

WORK SAFE BC

Employer's Report of Injury or Occupational Disease

If faxing form, please complete this section and fax both sides of page. Missing pages may result in delays in processing.

Worker last name	First name	Middle initial	WorkSafeBC claim number (if known)

Social insurance number	Personal health number (CareCard)	Date of incident (yyyy-mm-dd)	Date of birth (yyyy-mm-dd)
		- -	- -

Return-to-work information

39. Has the worker returned to work?
☐ Yes ☐ No

40. If **Yes**: Date (yyyy-mm-dd)

Since the return to work, have the worker's duties, hours of work, work schedule, and/or rate of pay changed? ☐ Yes ☐ No

41. If **No**: Do you have any modified or transitional duties available?	42. If yes, please describe modified or transitional duties
☐ Yes ☐ No Have the modified or transitional duties been offered to the worker? ▶ ☐ Yes ☐ No	

Signature and report date

43. Employer signature	44. Employer title	45. Date of report (yyyy-mm-dd)

For assistance, please call our Claims Call Centre at 604.231.8888 or toll-free within Canada at 1.888.967.5377, M–F, 8:00 a.m. to 6:00 p.m.

Please note: If you have concerns with this claim, please contact the officer handling the claim at the WorkSafeBC office to make known your objections or you may submit a letter detailing your specific concerns. **Impartial advice on WorkSafeBC claims** — To ensure you have an opportunity to obtain impartial advice on WorkSafeBC claims matters, the BC legislature has provided impartial advisers. **Employers' Advisers** are available to provide independent advice or clarification on a WorkSafeBC claim related to your firm. For additional information on the Employers' Advisers, please refer to their website at www.labour.gov.bc.ca/eao/.

Lower Mainland
604.713.0303 (Richmond)
Toll-free within Canada 1.800.925.2233

Abbotsford, Kamloops, Kelowna, Nanaimo, Trail, Prince George, Victoria
Toll-free within Canada 1.800.925.2233

WorkSafeBC collects information on this form for the purposes of administering and enforcing the *Workers Compensation Act*. That Act, along with the *Freedom of Information and Protection of Privacy Act*, constitutes the authority to collect such information. To learn more about the collection of personal information, contact WorkSafeBC's freedom of information coordinator at PO Box 2310 Stn Terminal, Vancouver BC, V6B 3W5, or call 604.279.8171.

APPENDIX 8-D INCIDENT REPORT AND INVESTIGATION FORM

INCIDENT REPORT FORM

Preliminary Incident Report to be completed and handed in to the Safety Department within 24 hours of the incident occurring.

Title of Incident:			
Incident Type:	☐ **Environmental** ***OR*** ☐ **Safety**		
Drug & Alcohol Testing Required? ☐ Yes ☐		Drug & Alcohol Testing Completed? ☐ Yes ☐ No	
Department:		**Contract Company:** *(if applicable)*	
Date & Time the incident occurred	**Date:** **Time***(24hr)*:	**Date & Time incident was reported**	**Date:** **Time***(24hr)*:
Location: *(Describe exact location where incident occurred)*			
Equipment Involved:		**Equipment No:**	
Employee Group:		**Person(s) Involved:**	
Occupation:	**Years Experience in Occupation:**	**Shifts worked prior to incident:**	
Witnesses:			
Description: *(Describe what happened in as much details as possible)*			
Additional Comments by Supervisor:			
Supervisor Name:			

Immediate Actions Taken:	
By involved person(s):	
By Management:	

Corrective Actions: *What has and/or should be done to prevent or eliminate reoccurrence?*

Description		**Person Responsible**	**Due Date**	**Completed Date**
1.				
2.				
3.				

Position	**Print Name**
Reported By:	
Reported To:	
Incident Involvement:	
Witnesses:	

Risks: *Actual Risk Ranking and Evaluation of Loss Potential if not controlled:*

Actual:	
Potential:	

Additional Comments: